THE LANCET.

VOL. II.] LONDON, SATURDAY, JUNE 21. [1827-8.

LECTURES ON VEGETABLE CHEMISTRY,

BY

PROFESSOR BRANDE.

Delivered at the Royal Institution of Great Britain.

LECTURE XLV.

Gum, Sugar, Starch, and Gluten.

I MENTIONED, Gentlemen, in the last lecture, that the ultimate elements of vegetable substances were few. Now, when a vegetable substance consists of carbon, oxygen, and hydrogen, its decomposition by heat presents us with a variety of substances resulting from their union; but if it should also happen to contain nitrogen, you will then have ammonia formed, and a variety of other products resulting from the union of nitrogen with the other substances named.

In proceeding to the analysis of any vegetable body, the chemist makes some experiments to determine its general nature; and we will suppose that it contains no nitrogen, but that, like most vegetable substances, it is composed of carbon, oxygen, and hydrogen; his object is to determine the relative proportions in which these elements are combined. Now, if we take sugar, starch, gum-resin, camphor, tan, and a great variety of other vegetable products, we find that they are all composed essentially of carbon, oxygen, and hydrogen, and you will naturally infer that the determination of their relative proportions in their bodies, will throw an interesting and considerable light upon the nature of the compounds generally, and serve to show how far they approximate to each other. I shall not take up your time by detailing all that has been done upon this subject, but describe to you the mode generally adopted for the examination of vegetable substances.

If you wish to analyse a vegetable substance, you must examine it to see that no impurities or foreign bodies are adhering to it, or the substance may be hygrometric; and if that is the case, you must avoid the contact of air; you must introduce it into a brass tube in a given state of dryness, and then mix it thoroughly with a certain quantity of peroxide of copper, which gives out no oxygen when heated alone, but which, when heated in contact with vegetable substances, imparts oxygen to their elements, in proportion as they are decomposed. So that if you take a tube of this kind, and introduce a quantity of peroxide of copper into it, with a given weight of sugar for instance, and apply heat at the further end of the tube, and gradually carry the heat down to the other extremity, a decomposition is effected; and it follows, that whatever the product may be, that is produced by the action of heat upon the copper, it will be found at the other end of the tube, either in the gaseous or liquid form. Here you see the analysis going on; you see that as the tube becomes thoroughly heated, a gas is extricated, which will afterwards be found to be carbonic acid gas; and to be certain of this, we may absorb it by a small quantity of potash, or soda, or ammonia, and its volume leads us soon to determine the amount of carbon present, and hence the index to the quantity of carbon which the vegetable matter contained. But the vegetable matter also contained hydrogen, and that, with the oxygen given out from the copper, will form water, which is to be absorbed by a portion of asbestos placed in the tube, and the amount of water absorbed may be learnt by its increase in weight, after the experiment. We know how much hydrogen is contained in a given weight of water, because nine parts of water contain one of hydrogen. Then the quantity of carbon being determined, and the quantity of hydrogen being determined, there will be a certain loss, which is to be ascribed to the oxygen. Now, although this shows you the form of the experiment, you must remember that it is one which requires great caution to obtain accurate results, and it is necessary to repeat the experiment, four or five times, on the same substance, before you can depend with accuracy upon the results.

Supposing that you had operated on fifteen grains of sugar, and that you had obtained a certain measure of carbonic acid gas, equivalent to six grains by weight of carbon, and that you had also obtained nine grains of water, which would contain one grain of hydrogen, you would say that there is contained in fifteen grains of sugar six carbon, one hydrogen, and a certain loss equivalent to eight, which you ascribe to oxygen. Now, suppose we take sugar, starch, gum, and wood, they contain no excess of oxygen, they are compounds of carbon and water; and when I say they contain no excess of oxygen, I use the term to imply that oxygen and hydrogen are in the same relative proportions as in water. Now you will easily remark, how closely these four substances correspond in their ultimate composition, and therefore you will not be surprised why it often happens, that by artificial means, we are capable of converting one of these substances into the other, by changing the relative proportions of their element; that we can, for example, convert starch and gum into sugar, sugar into gum, and gum into starch; and these are processes daily going on in nature, in the growth and ripening of fruits, and so on, but more especially the passing of starch and gum into sugar. Now suppose that any nitrogen had been separated from the substances you were examining, that would throw great difficulty in the way of the analysis, but to these nitrous compounds we shall advert afterwards. If nitrogen be present, and if the operation of analysis be successfully conducted, it might also be collected in the tube; but as nitrogen is not soluble in potash, you throw a little potash into the tube, by which you have carbonate of potash formed, and the nitrogen left free, and then you calculate the weights, and make out the proportions.

I have told you, that this process is one of difficult performance, and the chemist, who is in the habit of doing it, will tell you, that he is frequently obliged to repeat the experiment before he can agree as to the results; and I mention this to caution you against receiving these results as the real truth; you must merely consider them as approximations to it, and wait until it has reached a more ripened state. As far as regards carbon, hydrogen, and oxygen, the experiments made serve to convince us, that they form the elements of substances of these bodies: of that there cannot be much doubt.

Here is a table of vegetable substances, in which hydrogen and oxygen are mixed in the same proportions as in water, neither being in excess, as in sugar, starch, gum, &c.; then we come to a class of vegetable bodies in which oxygen predominates, as in the vegetable acids; and then there are other vegetable substances, in which hydrogen predominates, as in the resins, wax, oil, and combustible bodies. The examination of the proximate principles of vegetables would afford ample scope for a full course of lectures, so that we can only here state it very generally, not go into the details of abstract chemistry.

The separation of the *proximate* principles of vegetables is generally effected by certain solvents; if we take a piece of bark, for example, we first steep it in cold, then in hot water, and then in alcohol. If you then distil it with water, it may afford an essential oil, or the oil which it contains may be expressed; and in this way, by the action of solvents, we separate vegetable substances into a certain number of proximate principles. It does not much matter how we arrive at these; but I shall endeavour to throw them into a class founded upon this composition, according as they may contain hydrogen and oxygen, in the same proportion as water, according as they may contain either in excess; and lastly, such as may contain nitrogen.

Gum is a specimen of the combination of elements of the first class; it exudes from the acacia and other trees, and you find that there are great varieties of gum which differ a little in their chemical properties. Some chemists have divided the gums into two kinds; the first into the gums, properly so called; the second, such as are comparatively insoluble in water, as tragacanth and cherry-tree gum, and to these they have given the name *cerasin*.

The general character of gum is that it is soluble in cold and warm water, forming a viscid solution, known by the name of *mucilage*. As far as *gum-arabic* is concerned, it is distinguished by not being very prone to decomposition, if we except its becoming slightly sour, and by its being insoluble in alcohol. So, that, if you add a solution of gum to alcohol, the gum is precipitated; or if you put gum into alcohol, it is not taken up by it. It is soluble in water therefore, and insoluble in alcohol, and this is a property by which gum is recognised. Now, another character of gum is, that it is soluble in alkalies, and solutions of the alkaline earths, and that it is precipitated by the acids and by the subacetate of lead; and it is found that the precipitate which falls down is a compound of gum and the oxide of lead, called by Berzelius a *gummate of lead*, and he has ingeniously availed himself of the opportunity afforded by this compound, and some others, to determine the equivalent number of these vegetable bodies. [The formation of this compound was then shown by experiment.] You observe that instantly there is a coagulum

produced, which is insoluble, composed of gum and oxide of lead; and, in some cases, this is worth remembering, especially by medical men, who are not unfrequently ordering the solution of the sugar of lead in mucilaginous solutions, and so on, and their object must be frustrated by the subacetate losing its activity. When gum is exposed to heat it undergoes decomposition, and the products are formed which I adverted to the other morning, especially vinegar, and I mention this particularly, because at one time this vinegar was considered to be of a peculiar kind, and was called *pyro-mucous acid*, but it is the same as other vinegars.

Sugar exists in great quantities in the sap of vegetables, in ripe fruits, and in the roots of certain plants; but the great source of sugar, as far as we are concerned, is the sugar-cane; and the manner of obtaining the sugar is sufficiently simple.

It is generally imported into this country in the raw state, called *muscovado* sugar, and the refiner chooses that which has a bright hard grain, and is not guided by the colour. If he finds it sandy and hard, he prefers it to the soft and finer sugar, and the East India sugar is, on that account, unfit for refining; that brought from the West Indies being the best. The mode of refining sugar is briefly this, and if you consider sugar as a crystallised and uncrystallised compound, you have its two extremes of purity and impurity; you have it crystallised in sugar-candy, and uncrystallised in molasses, and these two exist combined in the common raw sugars, and the process of refining is to separate them. This process is generally commenced by filling large boilers with a mixture of lime-water and sugar, with certain quantities of bullock's blood; this was the old mode of proceeding, but lately a patent has been taken out for an improvement upon it. The object of the process is two-fold, the blood, congulating by heat, forms a scum upon the surface, and carries away a great quantity of impurity from the sugar of various kinds, which are then skimmed off; the use of the lime-water is to render the treacle very soluble, so that it may not afterwards interfere with the separation of the crystallised sugar. This mixture is boiled until, by taking up a drop of it between the finger and thumb, it can be drawn into threads, and it is then taken out into vessels, where it is stirred about with wooden instruments until it becomes, like the original raw sugar, in a granulated state. This sugar is afterwards put into conical moulds, made partly of clay, and water is poured upon their bases, and as the water trickles through the sugar it carries with it the uncrystallised part, and the cones become gradually whiter and whiter as the treacle trickles through. As the bases are more white than the apices of the cones, they are generally cut off; and when it is an object to obtain very fine sugar, the loaves, as they are called, are made of a smaller size.

If you wish to crystallise sugar, you dissolve it, and pass strings through the solution, and the crystals are then deposited upon strings in the shape of hexagonal crystals, irregularly terminated. The loaves are afterwards dried, and so far the process is complete. Now by the application of the required heat to the sugar in this process, a great loss generally ensues; the blood carries away a large quantity, and so forth, and therefore it has been proposed to boil the sugar in vacuo, by which it is made to boil at a temperature of 80° or 100°, instead of at the ordinary temperature under the atmospheric pressure; in this way the syrup may be evaporated, and you do not run the risk of burning the sugar, nor suffer that loss as by the other mode. The colouring matter has been thrown down by albumen, and the treacle obtained by passing the syrup through the sugar in the cones, and so on. These are some of the principal steps of the process, which are interesting to the chemist.

You may obtain sugar in considerable quantity from the maple, and from the juice of the beet-root. Figs, grapes, and honey, contain a peculiar species of sugar, which is easily distinguished by the taste. As to white candy, or pure sugar, it is soluble in its own weight of water at 60°, and the solution, if concentrated, is not very prone to change, but if diluted, it begins to ferment, and to form vinegar and acetic products.

The acids act upon sugar in a peculiar way; nitric acid converts it into oxalic acid, and sulphuric acid causes it to throw down charcoal, and to produce water and acetous acid. Lime-water dissolves sugar, and so do the alkalies, gradually converting it into a gummy matter. Oxide of lead and sugar combine to form what Berzelius has called a *saccharite of lead*. *Manna* is another kind of sugar, furnished by a species of ash in Italy; it yields oxalic and saccholactic acids, especially when treated with nitric acid. Now sugar is soluble in cold and warm water, and is separable by the same manner as gum; so that if you have gum and sugar mixed, you may separate them by alkalies; the separation is usually imperfect, but the sweet taste of sugar enables you to recognise it.

Starch exists in a great number of vegetables, and contributes very much to their nutritive qualities. Sugar and gum are very nutritious substances, but starch more so than either.

To obtain starch from the substances containing it, the process is to wash them in cold water, and as it is insoluble in cold water, the starch is washed out of the vegetables, and afterwards dried. The common wheat starch is obtained by first bruising the wheat in a mill, and then steeping it in water; after a time the water begins to get sour; it is then drawn off, and the starch is collected and dried. In drying, it splits into small columnar masses, and it is usually coloured by the manufacturer with a little indigo. You may procure starch from various substances; *arrowroot* is the starch of the *maranta arundinacea*; and the pith of certain palms abounds in starch; salop, tapioca, and cassava, are obtained from that source. Potato starch is also frequently used for culinary purposes.

Now although I represent these to you as the main varieties of starch, there are slight chemical differences between them; but I think it would be an useless sort of refinement in chemistry, to endeavour to designate these starches by different names. The starch being separated from the gummy and other parts of the vegetable, and dried, is fit for use, and its chemical characters are peculiar and well defined. It is insoluble in cold water, as its mode of preparation teaches; it is soluble in warm water at a temperature of about 160°, and forms a solution, which is slightly viscid. If you dissolve it in a smaller quantity of water, especially at a higher temperature, you get a kind of jelly, which afterwards is not very soluble in water; on the contrary, you may diffuse it through water, and it will not dissolve without great difficulty. This circumstance is well known to the brewer; if he lets the water in upon the malt too hot, it forms a *set*, and spoils his mash. Starch is also insoluble in alcohol. When, therefore, you have a vegetable substance containing starch, gum, and sugar, you separate the gum by cold water, the sugar by alkalies, and the starch by hot water; but suppose you have a vegetable substance before you, and you cannot tell whether it contains starch or not, you then make an infusion of it in water at 160°, and then drop into it a little solution of *iodine*. Now iodine has the singular property of combining with starch, and of producing a blue compound; and it is curious that no other vegetable matter at all effects iodine. [This was shown by experiment.] This compound has been called an *iodide of starch*. There are other characteristics of starch, but it is not necessary to point them out, as these, I have mentioned, will generally suffice.

Starch is converted into *sugar* by a variety of operations, and in *malting* you see this going on to a considerable extent. If you look at this table, in which starch, gum, and sugar, as far as their ultimate elements are concerned, are compared, you will see how little they differ from each other; and you can imagine that a slight change in their ultimate elements, will convert the one substance into another. If you take starch, and add a little sulphuric acid to it, it is converted into sugar; gum, when heated up to a certain point, under peculiar circumstances, seems to pass into a substance somewhat resembling sugar; and starch, when heated up to about 700°, very readily passes into a state of gum. Here are some specimens of starch which have been thus roasted; it is converted into a substance called *British gum*; it does not precipitate iodine; it is soluble in water; and when gum could not be obtained, roasted starch was substituted by the calico printers, who use a great deal of it.

Gluten.—When you separate starch from flour, a substance remains called *gluten*, which resembles in some particulars animal matter; and here you have a vegetable body, you perceive, well calculated for human food; and wheaten bread, you know, is well fitted for affording nutriment, children living principally upon it. Gluten exists in the greatest abundance in wheat flour, and the wheat of the south of Europe contains a larger quantity of gluten than that grown in the north. It also exists in barley and oatmeal, and, being mixed with starch, gives a great tenacity to bread made with these materials. When yeast is added to a mixture of wheaten flour and water at a certain temperature, the carbonic acid of the yeast is diffused throughout the mass of dough, and is detained there by the gluten, and thus we get a light bread. Wheat grown in this country contains from 18 to 24 per cent. of gluten, and, as I before said, it may be obtained from wheat flour by washing out the starch. It is of a grey colour, and, when dried, it becomes brittle, and of a darker colour. It is nearly insoluble in water, and when submitted to a destructive distillation, it gives out ammonia, thus resembling animal products in containing nitrogen.

In the next Lecture we shall proceed to the consideration of the remaining proximate parts of vegetables, extractive matter, tannin, and so on, and give you a short account of the process called *tanning*.

FOREIGN DEPARTMENT.

ON THE FUNCTIONS OF THE DIFFERENT PARTS OF THE ORGAN OF HEARING.

BY DR. CH. L. ESSER.*

This paper is the extract of a work to which the prize was adjudicated in 1825, by the Faculty of Medicine of the University of Bonn.

The cartilage of the external ear appears to contribute very little to render the sounds more distinct, but it serves to increase their force; not only by reflecting a part of the vibrations into the meatus auditorius, especially those which fall into the concha, but also by means of the vibrations which the undulations produce, and which are transmitted to the membrane of the tympanum. It is not correct, therefore, to suppose, (as M. Itard does,) that the external ear is of no service to man in hearing.

The bones of the head do not contribute less than the external ear to the propagation of sounds, which does not take place solely through the medium of nerves, as some authors have supposed, (Treviranus, Swan, &c.) for, in such a case, a watch applied on the cheek, ought to communicate sounds as clear through the medium of the facial nerve, as if it were applied on the zygomatic arch; but this is not the case.—The occipital bone is more adapted to the propagation of sounds, than the bones at the anterior part of the head; this is explained by its connexions with the labyrinth, and by the vicinity of the mastoid cells. The use of these cells is not to impede the echo in the interior of the ear, as M. Treviranus supposes; this function belonging to the Eustachian tube.

In several animals, the bones which surround the labyrinth, and those of the head in general, present arrangements very favourable for the propagation of sounds, in this way compensating for the absence of the external ear.

The meatus auditorius externus is evidently the part which contributes most to concentrate and transmit the sounds to the membrana tympani.

The membrana tympani is put into vibration by the undulations which reach it; a point doubted by M. Itard, although all other authors are agreed on it; this is, however, not the only use of this membrane; for the vibrations of sound can arrive at the internal ear without the assistance of it, and even with greater force; another function of the membrana tympani, is to protect the internal ear from external agents. The experiments of the author, and the facts which he relates, leave no doubt on this subject. The hypothesis of Antenrieth and Kerner, according to which the membrane of the tympanum is considered as an assemblage of cords differently stretched, in proportion as the membrane is round or oblong, is shown to be without foundation. The distinction of the different sounds does not rest on a mechanical arrangement of the ear, but on a psychological cause.

The Eustachian tube is the principal auxiliary of the membrane of the tympanum, and performs four different functions; first, it allows the air contained in the cavity of the tympanum to be placed in equilibrio with the external air. If this equilibrium be disturbed, derangements in the functions of hearing take place, such as the tinkling and stopping up of the ear. If the quantity of air contained in the cavity be increased by deep expirations, great pressure is made on the membrana tympani, and on the other parts of the cavity, especially the fenestra rotunda; this pressure is caused by the stopping up of the ear, which diminishes in proportion as the equilibrium of the air is re-established by means of the Eustachian tube. If the air in the cavity of the tympanum be rarefied, and the Eustachian tube shut from the effect of spasm, the external air presses on the membrana tympani, penetrates through its pores, and the tinkling is produced through this passage. The two phenomena disappear as soon as the equilibrium of the air is re-established in the cavity of the tympanum, which is effected by pushing the air towards the Eustachian tube, the mouth and nose being firmly closed; or by introducing the little finger very deeply into the meatus auditorius externus, and by gradually drawing it back, and pressing from below to above against the wall of this canal. Thus a vacuum is formed, the membrane of the tympanum is inclined towards the meatus auditorius externus, and the Eustachian tube gives passage to air from the back of the mouth. It is evident that this explanation cannot apply to all the phenomena which occur in the organ of hearing. Cerebral congestions, or derangements of nervous action, are the causes of more chronic sensations.

2d. The second function of the Eustachian tube is to allow the air contained in the cavity to be put in vibration; which could not take place if it were closed. In deafness from the obliteration of the Eustachian tube, the perforation of the tympanum is a means of cure, by re-establishing the communication of the tympanum with

* Kastner's Archiv. fur die ges. Naturlehre; tom. xii. 1er. cah. 1827, p. 52.

the external air. The opinion that the walls of the Eustachian tube are constantly in contact with each other is incorrect.

3d. The Eustachian tube prevents any confusion in the vibrations of air contained in the tympanum; and lastly, it serves to conduct the mucus secreted in the tympanum, and by its parietes, into the posterior nares.

The bones of the ear, by the assistance of their muscles, draw the membrana tympani in different directions; but it would be difficult to explain how, and for what reason, this effect takes place; their influence on hearing is not very clear; they serve to transmit the vibrations of the membrana tympani to the fenestra ovalis, although this is not their only use. Some physiologists, Treviranus, and others, deny the conducting property of these bones, because they found in hares a red and gelatinous mass, surrounding the ossicula; and which, according to them, is peculiarly fitted for the transmission of sounds; but this red mass is nothing else than effused blood, which is found only in those hares killed in the chase, whilst no trace of it is observed in those which are decapitated. The sac, in which this mass was contained, according to these authors, was, perhaps, the tendon of the stapedius. The bones of the ear, in some animals, are hollow, and thus appear more fit for the transmission of sound.

The labyrinth, although well understood in its anatomical relations, is, and will, probably, always remain the most obscure part of the organ of hearing, as to its real use. The experiments which the author has made on the existence of the fluid of Cotugnius, are not decisive, and it remains doubtful if this liquid exists during life, or whether it is merely produced after death.

The vestibule or *membranous sacs* which exist in some animals, and the *semicircular canals* appear to contribute most to the sense of hearing; but it is difficult to say in what manner. By looking at comparative anatomy, we find that the principal utility of the semicircular canals is to strengthen the sounds. They are very much developed in those animals which have no external ear, or which is badly formed, (for instance, birds, mole, man,) those semicircular canals which are well developed, are generally accompanied with a small cochlea, and *vice versâ*. Man is the only exception from the equilibrium between these two parts. The cochlea appears to be of less importance than the semicircular canals; for it soon disappears in the animal kingdom, and birds only possess a rudiment of it; it presents more varieties than the semicircular canals; its principal use appears to be that of presenting a greater surface for the vibrations of sounds and of concentrating them, and in this way giving them power. The opinion of several authors, that the cochlea serves to distinguish the quantity and quality of sounds, does not agree with the results which comparative anatomy furnishes.

The distinction between different sounds is a function purely psychological. If the development of the cochlea indicates the development of the faculty of distinguishing the different species of sounds, the following is the order in which it is found in animals and man:—1st. The porcupine has 3½ spiral turns: 2d. the dog and fox, 3 turns: 3d. man, cow, hog, and cat, 2½ turns: 4th. the horse and dolphin, 2¼; and the rabbit, 2 turns: birds occupy the last place in this series.

The part which the *auditory nerve* takes in hearing is undoubtedly of the greatest importance; but the philosophy of its functions will always remain a mystery.

ST. GEORGE'S HOSPITAL,

FEBRUARY 1, 1828.

The following Regulations will be observed respecting the Surgical Attendance of St. George's Hospital.

1. THE house surgeons will begin to go round the wards every morning regularly at ten o'clock, and the pupils, who are not otherwise employed, are recommended to be at the Hospital by that hour.

2. On their days of regular attendance, the surgeons will be at the Hospital as soon after twelve o'clock as possible, and they will visit on those days the whole of their patients. On other days, they will attend according to circumstances, some time between the hours of twelve and two.

Monday and Friday in each week are the days of the regular attendance of the two senior surgeons; and Tuesday and Saturday, those of the two juniors.

3. The examination of the new patients, who apply to the weekly board for admission, will take place on the Wednesdays, in the examining rooms, at a little after twelve o'clock.

4. The more important operations of surgery will be performed on Thursdays, in the operating theatre, at half past twelve o'clock, except any circumstances should render a deviation from this rule necessary.

The minor operations will take place in the course of the ordinary visits of the surgeons, and in the different wards.

5. A clinical lecture will be given once in the week;—generally on Thursday, at one o'clock, or as soon as any operations,

which may take place on that day, are finished.

6. The examination of the bodies of those who die in the Hospital, whether under the care of the physicians or surgeons, will take place in the theatre belonging to the dead house, either on the day of the death, or on that immediately subsequent to it, at half past one o'clock.

A notice will be placed in the pupils' room, by the house surgeon of the week, of any operations to be performed, or of any post-mortem examinations to be made.

7. The case-books of the surgeons will be open to the inspection of the pupils, and may at any time be obtained by application to the house surgeons; but the pupils are particularly recommended to take notes of the cases themselves; and they may be called upon to produce these, prior to their obtaining a certificate of diligent attendance.

8. Tables, explaining the different descriptions of diets, will be found in the wards; and the particular diet of each patient will be seen over his bed. The medicines prescribed for the patients will be inscribed on a card suspended by each patient's bed, on which will also be specified any extra articles of diet, or any wine or beer that may be allowed.

9. Two or more of the students, who are found qualified for the situation, will be selected annually to act as clinical clerks. The duties of these will be, to attend the surgeons in their visits, to take notes of the more important cases, and to enter them in a book, which will be kept for the purpose in the pupils' room, and which, as well as the surgeons' case-books, will be open to the inspection of the pupils generally.

Gentlemen, who wish to officiate as clinical clerks, will make application to the surgeons. They will be required to produce notes of cases which they have taken, to enable the surgeons to judge of their fitness for the situation.

10. The house surgeons will be appointed from the best qualified of the perpetuals, after an attendance of at least three years.

Gentlemen, desirous of obtaining that appointment, must signify their wish to the surgeons, that their names may be entered in the list of candidates, which cannot be done until they have completed one year of regular attendance on the Hospital; and, after being admitted as candidates, they must not discontinue their attendance, without permission of the surgeons, or their names will be erased from the list.

11. The dressers will be appointed from the perpetual and annual pupils, after they have completed at least six months of their attendance.

Those gentlemen who are desirous of officiating as dressers should, at an early period after their entrance, signify their wish to the senior house surgeon, that their names may be entered in the list of candidates; and, if attentive, and found to be qualified, they will be appointed in their regular turns.

Each dresser will continue in office for twelve weeks, and perpetual pupils may hold the appointment a second time, after they have completed the first year of their attendance.

The dressers will be required to be very punctual in their attendance, and not to leave the Hospital until the business of the day is finished.

The dresser of the surgeon of the week must be at the Hospital by nine o'clock in the morning, and remain there until ten o'clock at night. He will board in the Hospital during that week.

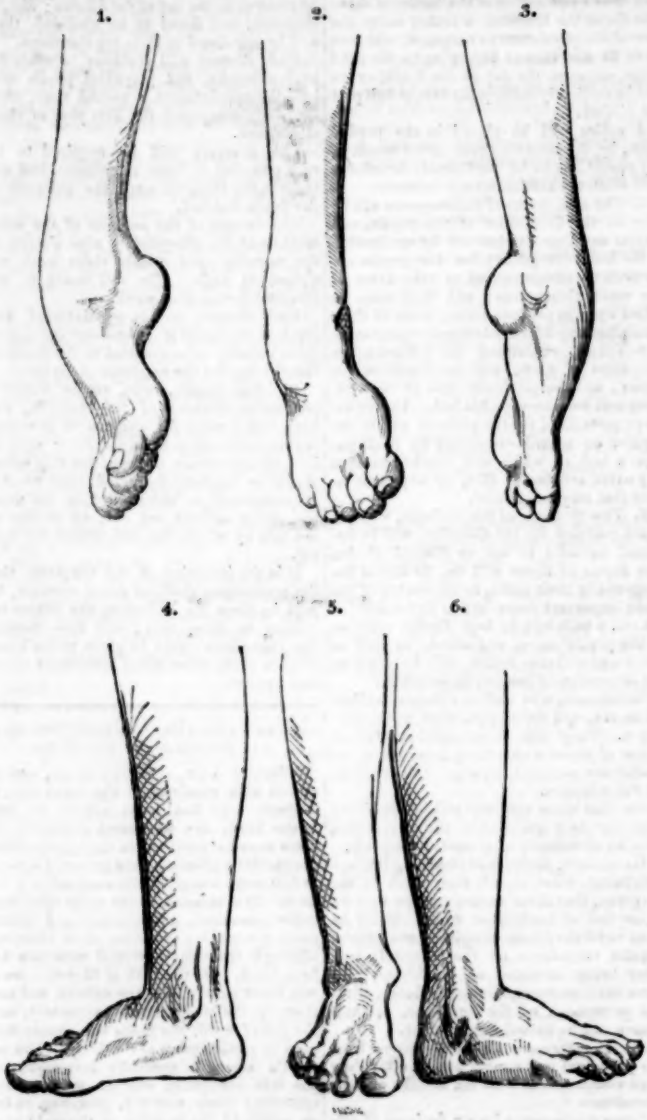
Each dresser, on his appointment, will pay into the hands of the steward the sum of three pounds, to be credited to the funds of the charity, for the expenses of his board.

12. The pupils, who reside within a reasonable distance of the Hospital, will have notice when the surgeon of the week is sent for to any serious accident; and, as it is of importance to them that this notice should be regularly delivered, each pupil is recommended to ascertain that his name and proper address are entered on one of the lists by which the summonses are sent out.

It is the intention of the surgeons, that the messengers shall, on every occasion, be paid by them for delivering the letters according to these lists; and they request that immediate notice be given to the house surgeon of the week of any inaccuracy which may appear.

CASE OF PARALYSIS, IN WHICH THE MOXA WAS SUCCESSFULLY EMPLOYED.

Elizabeth Cox, aged fifty-seven, was attacked with paralysis of the right side, in August. She had been subject to pain in the head, and occasional giddiness, for some months previous to the occurrence of the paralytic affection; the power of speech, at first lost, was gradually restored in a few days. The muscles on the right side were quite powerless, and scarcely any indications of returning sensation were observed, although the most powerful remedies had been tried. On the 14th of March, a moxa was burnt slowly over the deltoid, and another over the biceps, and subsequently, until the 6th of April, the moxa was almost daily used in various parts of the body. The patient's strength gradually increased, and she was eventually able to walk without crutches; there was not, however, so free an action of the muscles on the right as on the left side.


1.
2.
3.
4.
5.
6.

MR. SHELDRAKE ON DISTORTIONS OF THE FEET.

To the Editor of THE LANCET.

SIR,—I now send another case of distortion, which took place some time after birth, without any defect in her limbs: in its general features it resembles the last, but there are some circumstances in which it differs from that case.

I am, Sir,
Your most obedient servant,
T. SHELDRAKE.

No. 276, Regent Street.

In May, 1800, a gentleman consulted me about his daughter, of whom he gave the following account:—

She had been healthy from the birth, till about the end of two years, when she had a fever, and, at the same time, lost the use of her limbs, as it was supposed, by a paralytic stroke: from this she recovered soon; but it was observed, that her right foot was weaker than the left. As she grew, this defect increased; the foot became weaker, and deformed to such a degree, that, at last, she had no power to use it; it became rigidly fixed in its deformed state, with much tendency to increase in deformity, in consequence of the very imperfect manner in which she was able to move about. The left leg and foot now began to assume a similar appearance, though in a less degree. Electricity, the Bath waters, and every other means that could be devised, had been tried, without effect, for her infirmities increased so much, that she could not walk across the room, without being led by an assistant, and supported by a stick: she began to be distorted from the pelvis upwards; as every circumstance of the disease was rapidly increasing, without any well-founded expectation of restoring the form and powers of the parts affected, application was made to me, to contrive some means of preventing her from getting worse; and, if possible, of enabling her to move about in the situation she then was.

At this time her right foot was, as it was believed, in consequence of permanent contraction of the tendo-Achillis, so drawn downwards, that the ball of the great toe, the heel, and the calf of the leg, were in a direct line with each other; the foot was much shortened, and rendered hollow on the bottom and the inside; the great toe was much drawn up, and appeared to be permanently shortened, because it was most rigidly fixed in the position it was then in; the circular head of the astragalus was out of its natural situation, and lay in a direct line with the front of the leg; the toes were turned inwards so far, that when she attempted to stand or walk, she rested upon the nails of the three middle toes, as the great toe did not touch the ground. In consequence of this state of the foot, every attempt she made to walk or stand upon it, had a tendency to increase the deformity. The leg was flaccid, much wasted, and she was not conscious of any sensibility, either in the leg or the foot.

The left foot had made so much progress towards the same state, that, in any other patient, it would have excited much alarm; but, in this, the right was so much worse, in every particular, that the left leg was a subject of inferior consideration; both the knees bent inwards; the distortion that was beginning to take place above the pelvis, had not yet assumed a permanent form, and, as it was evidently produced by the deranged action of the legs, was not, at this time, an object of attention.

When the father of this patient applied to me, he had no expectation of more than palliative relief; but, in consequence of the opinion I gave, he determined to place her under my care, that I might do every thing that was practicable, to effect a cure as complete as the circumstances of the case would admit. At this time I had casts in plaster of Paris, taken from both her feet; as the left foot was treated, in every respect, the same as the right, and being less distorted, became sooner well, I shall confine these explanations to that foot only.

From the cast of the right foot, which was taken before anything was done to it, I made the following measurements:—

	Inches.
The length of the foot	6¼
Breadth of the foot at the toes	3
Circumference of the foot at the toes	7½
Measure taken over the instep, and round the heel	9
Measure round the smallest part of the leg	5½
Measure round the largest part of the leg	8½
Measure taken from the patella, to a line drawn parallel to that part of the heel which was nearest to the ground	11

Though she had no sense of feeling in her legs or feet when I first saw her, when my treatment had been carried on about a week, she felt a glowing warmth pervade both her legs, which continued during the whole time of the cure, with so much tendency to increase, that it required much attention, during the progress of the cure, to prevent it from becoming excessive; the form of the feet underwent gradual improvement; and when she was standing, there was little to distinguish them, in point of appearance,

from the feet of any other person. At this time I had another cast taken from her right foot, from which the following measures were taken:—

	Inches.
Length of the foot measured	7½
Breadth of the foot at the toes ..	3½
Circumference at the toes	8½
Over the instep and round the heel	10½
Round the smallest part of the leg	6½
Round the largest part of the leg	9½

By comparing these measures with those that were taken from the same foot in the preceding way, it will be seen how much was gained in size, as well as form, in the preceding eight months; upon this subject, it is to be observed, that the length of the foot, and the change of position of the heel, must be attributed to alteration that had taken place in some of the bones of the foot, viz. the circular head of the astragalus was now restored to its natural position under the scaphoid cavity of the tibia, by which change the os calcis was enabled to place itself on the ground, and the natural motion of the ancle-joint was regained, though there was still no power existing in the joint, by which motions could be directed in obedience to the will of the patient.

The increased size of the fleshy part of the leg, being one inch in the circumference for the whole length of the leg, is certainly to be attributed to the growth, in consequence of the action of the gastrocnemeii muscles being partially restored. As so much had been done, it was determined that she should continue under my care. She remained with me two years longer, when her feet were returned to their natural form and powers, which she always retained; for ten years afterwards I had some correspondence with her, in which she told me that she was capable of taking every kind of exercise which her rank in life, as a gentleman's daughter, rendered necessary.

Before she was finally removed from my care, I had casts taken from both her legs; from the cast of the right leg, I took the following measures:—

	Inches.
Length of the foot.....	9
Breadth of the foot at the toes	3½
Circumference at the toes	8½
Circumference over the instep and heel	11
Measure of the smallest part of the leg	6½
Measure of the largest part of the leg	11½
Length from the patella to the bottom of the foot, as she stood upright with her heel flat on the ground ..	17

The difference between these measures, and those which have already been given, will show the advantages which were gained, in point of size and form, by this patient, besides her having been restored to perfect health.

The figure 1 is a profile view of the right leg, looking at the inside of the tibia.

Figure 2 is a front view of the right leg.

Figure 3 is a profile view of the right leg, looking at the outside of the leg.

Figure 4, a profile view of the right leg when restored, looking at the inside of the leg, the same as figure 1.

Figure 5, view of the right leg restored, looking at the front, the same as figure 2.

Figure 6, outside of the right leg restored, in the same view as figure 3.

GILHAM THE MURDERER.

To the Editor of THE LANCET.

SIR,—The body of Robert Gilham, who was executed at Ilchester, on Wednesday last, for the murder of his fellow-servant, Maria Bagnall, was removed the same evening to the Bath United Hospital for dissection. A notice was posted on the hospital door, that the surgeons of the institution would, on the succeeding and following days, demonstrate the body, to which medical men and pupils alone could be admitted, as they (the surgeons) having understood that the deceased had a brother, a respectable individual, living in Bath, would not hurt his feelings, by making a public exhibition of his brother's body.—Gilham was 28 years of age, about 5ft. 6in. high, having a very receding forehead, light hair, heavy brows, small eyes, and rather large mouth. His general appearance little accorded with Lavater's principles of physiognomy. A cast of the skull was taken by Mr. Crook, phrenological lecturer; and of the features, by Mr. C. Harries, the house-surgeon.

Mr Soden's demonstration was confined to the muscles of the chest, branches of the aorta, and variations to which they are subject, (illustrated by preparations from the museum,) the axilla, and operations for aneurisms. In securing the subclavian, Mr. Soden prefers operating above the clavicle, making his incision along the upper edge of that bone from the insertion of the trapezius to the origin of the mastoideus; a second incision, of about two inches in length upwards, passing the ligature from above downwards between the nerves and the vessel, and on the outer side of the scalenus anticus; thus avoiding the probability of injuring the scapular and transversalis colli arteries, &c. The innominata, Mr. Soden believed, had been tied but three times—by Graefe, of Berlin—Dr. Mott, of New York, and Mr. G. Norman, of Bath.

Mr. G. Norman demonstrated the abdominal muscles, the inguinal rings, and parts

connected with inguinal hernia: the operation, and means to be resorted to for returning the bowel before an operation, the taxis, bleeding, warm bath, freezing mixtures, and the tobacco enema; but the lecturer particularly pointed out the fatal consequences of deferring the operation too long. In external inguinal hernia, Mr. Norman cuts upwards and outwards; in the internal bubonocele, directly upwards; or, as a general rule, or where there is uncertainty which species of hernia exist, directly upwards. Next was the anatomy, physiology, and pathology of the thoracic and abdominal viscera. Amongst the cases of disease in the alimentary canal that Mr. Norman mentioned, was one in which the patient, who had been long declining, suddenly became worse, inflammation followed, and death closed the scene of suffering. Dissection revealed the mischief. An abscess had destroyed the villous and muscular coats of the stomach, on its posterior portion; this injury was evidently not recent. The immediate cause of the patient's death was the rupture of the peritoneal coat, and the contents of the stomach escaping into the abdominal cavity. A second case of diseased abdominal viscera occurred in the private practice of Dr. Pring, at the time of the ———— a general practitioner in Bath; the case was diseased rectum, the stricture of which increased till a bougie could no longer be passed. Stoppage had existed for several days; the pulse was scarcely perceptible, and the whole symptoms indicated death was close at hand. Mr. Pring, therefore, proposed making an opening in the parietes of the abdomen and segmoid flexure of the colon. This was effected, and relief obtained almost instantaneously. The patient recovered, or survived the operation, seven or eight months. Upon examining the body, after death, the rectum was completely mortified, the sacrum denuded and carious.

Mr. Wilson Brown explained the most approved methods of operating for femoral hernia. Mr. B. divides the stricture parallel to the horizontal ramus of os pubis; and he observed, that where the obturator artery did arise by a common trunk with the epigastric, (and which did not originate thus once in twenty times,) that wounding the former vessel was not to be considered a certainty in this way of operating. The operations for femoral and popliteal aneurism were next performed on the dead subject. Mr. Brown concluded with remarks on fractures of the cervix and shaft of the os femoris. Three cases of the former accident he had met with in the last twelve months; the patients got well with very little shortening of the affected limb.

Fractured patella.—Two cases had been brought to the Hospital lately: one was a severe radiated fracture, from a kick of a horse; the patient recovered in eight weeks.

The demonstration of parts by Mr. Gore was very minute; it comprised the muscles and operations on the upper and lower extremity, on the throat, the carotids, laryngotomy, and bronchotomy. The danger of attempting the latter too hastily, and without drawing aside an artery that might be in the way, was exemplified in the subject on the table, in which an artery proceeded upwards from the innominata to the thyroid gland. In the lateral operation for lithotomy, make your external incision, said Mr. G., parallel to the raphe of the perineum, and let it, in the adult subject, be three inches in length; divide the trans. per. muscle and a small portion of the sphin. ani, and placing the knife in the groove of the staff, make a free opening through the membranous portion of the urethra, prostate, and neck of the bladder; thus, if the calculus be large, you will extract it without a protracted operation and laceration of the perineum. Mr. Gore did not say whether he used the knife or gorget. In elucidating the parts concerned in generation, Mr. G. referred to the rich stores furnished the medical student in comparative anatomy, observing, that each vas. sem. was formed by the convolutions of a single vessel, and that in the greater number of animals the vesiculæ did not communicate with vasa efferentia. Mr. G. inferred that they had a particular and independent function connected with the purposes of generation.

I have heard many lectures in London inferior, both in a scientific and practical point of view, to those delivered at the Bath Hospital. The physicians of the Hospital are—Dr. Mutlebury, Dr. Hardy, and Dr. Barlow; the latter gentleman is, I think, a contributor to THE LANCET. Of the surgeons, Mr. Soden is celebrated as an ophthalmic surgeon; Mr. Wilson Brown, operates successfully in hernia, and Mr. Norman in lithotomy. Mr. Gore, and his partner Mr. Kitson, are surgeons to the General Hospital, but not to the United; at this Hospital, however, Mr. G. assists in capital operations; he is well known in the scientific world as an author and translator.

You have so frequently animadverted on the monopoly of the College of Surgeons, in refusing certificates of attendance on respectable provincial hospitals, that I transmit you the foregoing sketch, it is hastily drawn up, for I am just returned from the lecture; you will oblige me by inserting it in your next valuable periodical; its object is to prove, that efficient teachers of surgery *do exist* beyond the recognised pale of the College. My opinion of the efficiency

of the Bath Hospital is of course open to contradiction. One thing permit me to state, I am not interested in publishing a false statement. I am not intimately acquainted with a single officer of the institution. One good would result from the reception of provincial certificates by the College, that while the medical pupil would still desire to witness the practice of a metropolitan hospital, before he applied for a diploma, he would not defer *all the following studies for his two winters in London*—botany, chemistry, anatomy, surgery, midwifery, and the practice of physic.

I am, Sir,
Your obedient servant,
D.

Bath, June 11, 1828.

CLINICAL LECTURE ON THE EXTIRPATION OF THE NECK OF THE UTERUS,

BY M. LISFRANC, PARIS.

To the Editor of THE LANCET.

SIR,—The following are notes which I took at a clinical lecture given by M. Lisfranc, previously to amputating the neck of the uterus of a young woman, in whom schirrus had commenced at that part. I am aware that you have already published, in your 12th Vol., an account of this operation by Mr. Turley of Birmingham; but as there are some points mentioned in this lecture concerning the anatomy of the parts, and the symptoms following the operation, which he has not noticed, as well as a fuller description of the after treatment employed, you will, perhaps, not think it unworthy a place in your Journal; more especially, as this operation has not yet met with the attention which I think it deserves in this country.

I remain, Sir,
Yours obediently,
O.

M. Lisfranc began by giving a short history of this operation. The first attempt was the removal of the whole uterus through the vagina; this was successfully performed, in one case, by a surgeon in Switzerland. Langenbeck removed the uterus, in fifteen cases, by an incision above the pubes, as for the high stone operation; but all his patients died. M. Dupuytren removed the neck of the uterus by paring it *in situ* with a knife, curved laterally, having first introduced a speculum to guard the vagina and fix the uterus: this mode M. Lisfranc reprobated: the blood prevents you seeing whether you have removed all the disease or not; and the vagina may be wounded from the uterus receding before the knife. Many of his cases terminated fatally.

M. Lisfranc then proceeded to describe his own operation. This is to be commenced by introducing the speculum, (described by Mr. Turley, but for which Weiss's might be substituted with advantage) the blades of which are then to be gradually separated; this stretches the upper part of the vagina, and brings the mouth of the uterus within the tube; the inner surface of which being polished, reflects the rays of a candle held at the orifice, and enables one thoroughly to examine the state of the part. The neck of the uterus should now be seized transversely with a pair of forceps, each blade of which terminates in two pointed curves, care being taken to apply them at an equal distance from the fore and back part, otherwise the uterus will descend obliquely, and the incision will be oblique, instead of perpendicular to the axis of the organ; in applying the forceps we should seize the part rather suddenly, otherwise the instrument may slip and wound the vagina; we now remove the speculum, and gradually draw the uterus as low as we can; this point differs in different women, in some we can make the neck project some lines beyond the vagina, in others it will not quite reach the orifice; the latter case rendering the operation rather more difficult. An assistant should now separate the labia moderately, and another pair of forceps are to be applied perpendicularly to the former, with the blades above and below; for if we have only one pair, when the cut has past the level at which they are applied, the uterus is drawn obliquely by the part yet undivided; and instead of the incision being in one plane, a flap is formed, of some lines in length, on the fore part; the second pair obviates this inconvenience. The assistant now raises the neck of the uterus a little, to allow room for the knife; this is a curved blunt-pointed bistoury, the blade of which is sheathed with linen from the handle to within an inch and a half of the point; with it the neck is to be cut directly across from behind, at the requisite height; the forceps are then removed, and the uterus is allowed to retire.

The bleeding is not generally great; in only one of 22 cases, in which I have operated, have means been used to check it; and in this they were probably unnecessary, as they were employed by a young student in whose charge the patient had been left.

About an hour after the operation, vomiting generally occurs, returning every quarter of an hour for four, six, or even ten hours; this is, at first, alarming, the patient becoming pale and exhausted; the vomiting too generally causes a return of bleeding;

but I am loth to use means to arrest it as it disgorges the uterus and prevents the chance of metritis. These symptoms subside gradually, and by the following day the patient appears quite well, the lancinating pains of the cause having disappeared, &c. In only one case metritis appeared, but readily yielded to a large application of leeches.

On the third or fourth day, the surgeon should introduce his finger into the vagina, and remove any clots which may have lodged there, as their putrefaction would irritate the wound. I think this better than using injections which should not be employed until the seventh or eighth day, as the parts are as yet tender from the tractor, and there is danger lest the pipe be incautiously thrust against the wound. About the eighth day we may examine the part with the speculum, and we shall generally find it covered with healthy granulations and half cicatrized; we may now begin to use an injection of the solution of chloro-oxide of sodium, weak at first, gradually increasing the strength; the wound heals rapidly, but should a small ring remain sore, round the orifice of the uterus, we may employ the nitrate of silver in solution. In five or six weeks the patient is well.

In some patients, during the healing, some alarming symptoms occurred, viz. lancinating pains in the uterus; these, however, generally proved to be preludes to the appearance of the menses, and disappeared with them.

The objections which have been urged against this operation are, 1st. That the peritoneum descends so low, and the insection of the vagina on the uterus is so narrow, that there is danger of wounding the peritoneum in removing the diseased part. 2d. That in many cases the neck is so softened as not to afford sufficient hold for the forceps. To the first I reply, that before I performed this operation, I examined the parts in upwards of 30 subjects at la Pitié, and in all I found that the insection of the vagina instead of being linear, occupied a space of three or four lines all round, and that the distance from the commencement of the insection to the fold of the peritoneum was seven lines in front, and six at the back, thus obviating all danger of wounding the peritoneum, even were we to amputate at the insection of the mucous membrane. To the second objection, I can only say, that where the neck of the uterus is so softened, the body will be always diseased, and that nothing but the complete removal of the organ can succeed.

The patient, a young woman, aged 24, was now brought in and operated on; the chief part of the pain was caused in drawing down the uterus; the incision also gave more pain than in either of the former cases I saw, (those described by Mr. Turley,) for then neither patient was aware when the incision was made, and thought, when the operation was concluded, that the preliminaries only had been made.

Bleeding continued for about four hours, about 14 oz. of blood were lost, which caused fainting. In the evening slight pain in the belly, for which she was bled to 4 oz., was rather sick once, but did not vomit. Passed a bad night; probably kept awake by a woman in labour in the same ward. On the following day she had a slight attack of gout in the middle finger of the right hand; she had had one attack previously.

The case continued to do well, and the wound healed kindly.

CASE OF RETENTION OF URINE.

By —— HARE, *Esq. Great Baddow.*

In a late communication, I promised you some interesting particulars of a case of retention of urine, which occurred in my practice some years ago. As there is a cast of the case in the museum of St. Thomas's Hospital, I feel that a short history of it ought to go down to posterity, at the present moment, as all the parties concerned are living except one, and may further elucidate or correct any errors I may inadvertently have fallen into.

I have repeatedly urged the gentleman to whom the patient belonged, to publish the case, but without effect; whether this arose from a consciousness that there was a fault in the operation, I know not; if so, I am willing to bear the blame with him; though not the operator, I was present, and consenting, and therefore ought to share, and not shrink from, the responsibility.

The operation was performed in the linea semilunaris, an unusual place, and too high up; this arose from the great ascent of the bladder, and not reflecting that when the water was drawn off, it might contract to such a degree, as to recede from the instrument, and endanger an infiltration of the urine into the cavity of the abdomen; that this did not occur, I have no doubt arose from its having formed adhesions to the parietes with which it was in contact.

About five years ago, I was accidentally introduced to Sir Astley Cooper, at Guy's, surrounded by his pupils; he immediately addressed me, and said he was constantly speaking of me in his lectures; I told him I was not aware that I had done anything to entitle me to such an honour; he mentioned the case of a man who had worn a catheter in the abdomen upwards of a twelvemonth, and that he had got a cast of it in the museum, which he very kindly invited me to see.

I shall state the leading particulars, with as much brevity and precision as I can.

—— Palmer, a florid healthy man, about thirty years of age, consulted a neighbouring physician for a difficulty in making water, from a stricture of some standing; he prescribed some medicines, and recommended the use of the bougie; the attempt brought on complete retention of urine. After every means had been unsuccessfully tried for many hours to relieve him, I was called in; I found him in great distress, the bladder enormously distended, filling the whole anterior part of the abdomen. I advised that the bladder should be immediately tapped above the pubis, which being assented to, several pints of urine were drawn off, to his great relief. The puncture was made with a very large-sized trocar, whose calibre admitted the introduction of a female catheter, which was left in, in order to evacuate the water, till the natural passage could be restored. When he had sufficiently recovered from his late severe sufferings, every proper attempt was made by bougies and catheters to overcome the stricture, without effect. The course was then had to the caustic bougie; after several applications, it brought on inflammation and swelling of both testicles, and such high symptomatic fever, as to place his life in jeopardy for some days.

After several months' confinement to his bed, he gradually recovered, and was enabled to follow his ordinary business of driving a van. The wound became sore and excoriated; he felt anxious to have something done to relieve him. He consulted Mr. Cline, who declined doing anything for him; advised him to rest satisfied with his present situation, considering the great improbability of finding the natural passage, and the hazard attending the making a false one. Not satisfied with this opinion, he was most fortunately recommended to Sir Astley Cooper, who, with a boldness, dexterity, and skill, not to be surpassed, and rarely equalled, succeeded in passing a sound into the bladder, and sent him into the country with the following note addressed to me:—

"Mr. Astley Cooper presents his best compliments to Mr. Hare, and although he has not the pleasure of knowing him, yet he respects him, on account of his superior skill, as evinced by the case of Palmer.

"Mr. Cooper has done all in his power to re-establish the natural canal, and a bougie, of the largest size, can be passed. The female catheter may be removed in the course of a week, as he can make water perfectly well.

"New Bond Street."

It affords me great pleasure to add, that he has enjoyed perfect health since the operation, having all the functions and procreative faculties of the parts happily restored.

This case shows, in a striking point of view, the great resources of nature, and the superiority of modern surgery, as evinced by Sir Astley Cooper.

I have no doubt, a great part of the passage was a newly made one, yet it has taken on all the functions of the natural one. It tends also to confirm a most important pathological fact, viz. that whenever the bladder is wounded in any part, that point becomes the centre towards which all the contractions of this organ are directed, and consequently the urine is expelled by these contractions; for, notwithstanding the bladder was tapped so high up, the urine was readily expelled through the catheter, without any change of posture.

Great Baddow, Essex, May 10, 1828.

CASE OF RHEUMATISM SUCCESSFULLY TREATED BY ACUPUNCTURATION.

BY T. W. WANSBROUGH, ESQ. FULHAM.

The following case exemplifies, in a most remarkable degree, the efficacy of acupuncturation, a remedy which, in despite of the sneers of certain learned sages, has come into general use.

Christopher Rowles, ætat. 68, applied for relief, in consequence of severe pain in the back of his head, under which he had laboured, in a state of *continued* suffering, for seventeen weeks. He had been attended by a medical man, who had treated him for rheumatism. He had been "physic'd, cupped, and blistered," but had found no relief; his sight had become impaired, and his frame much emaciated by long suffering. He referred to the occiput as the seat of pain. His head was inclined towards the left shoulder, that is to say, the action of the left splenius had drawn the head in that direction; he had not the power in his right arm to take off his nightcap, nor to put it on; the same difficulty existed with respect to putting on his coat, so that either in the elevation or extension of the arm, the muscles were incompetent to their offices. On examining the ridge of the occiput, the pain was very sensibly felt, as also on pressing the trapezius and splenius along their course, down to the line with the superior posterior angle of the scapula; the sense of pain was greater on the left side, and especially throughout the whole extent of the left scalenus. The tongue was clean, pulse steady, bowels regular, and skin cool. Having sa-

tisfied myself that the *seat* of the disease was *muscular* and not *cerebral*, I proceeded to perform the operation of acupuncturation; I introduced a needle two inches from the ridge of the occiput into the trapezius and left splenius; acute pain was felt, and the patient moved his head towards the *left* side, I then introduced a needle through the trapezius, and into the *right* scalenus; in *one minute* the patient exclaimed, "I can see now! God bless my soul." His head became straight, and he turned it about, like a man released from the pillory, delighted at his emancipation from a yoke that had bound him for seventeen weeks. When asked, "Where was the pain?" He answered, "Gone," in a tone of wonder and surprise. He then requested me to assist him in putting on his nightcap. "Come," said I, "let me see whether I can't make you do it yourself." I passed two needles into the right deltoid, and suffered them to remain a minute; when I removed them, he raised his hand to his head, put on his nightcap by himself, and his coat and waistcoat with very little assistance. He again moved his head about, as if to be certain that it was not fixed, and, with joy on his countenance, exclaimed, "O, I can see now very well;" and left him free from all pain or inconvenience, excepting debility, which his long illness had produced.

On the following day the pain returned in a slight degree, but was instantly "routed" by one needle; a *second* introduction into the deltoid enabled him now to put his hand *behind* his head. I will confess that I never experienced more heartfelt satisfaction in the exercise of my profession, than I have in performing the operation of acupuncturation. The wife of Rowles, whilst witnessing the introduction of the needles, was utterly astounded when she heard him immediately after declare himself *free from pain*; her eyes were filled with tears of grateful joy, and her hands were clasped in wonder and astonishment; the old man himself, when he returned home, "cried for joy," exclaiming, "He has cured me!"

There is something in the history and character of this case, connected with the primary and *ultimate* treatment, which strikes me as bearing on the pathology of that train of horrible symptoms, which so frequently come under the sweeping cognomen of "rheumatism of the head." To a common observer, when Rowles put his hand over the occiput, and stated that he had had "rheumatism" *in* his head for *seventeen* weeks, that he had been cupped and blistered, and had not received any relief, it would certainly have appeared, that the *brain* was the seat of the disease, and, at the moment, I thought so too; but, on considering the *ratio symptomatum*, and the *duration* of the disease, I could only imagine one of two things, either that the patient must have suffered in *mind*, from such long-continued cerebral disease, or that the affection was *muscular*. The *former* symptom, on inquiry, I learnt, had not appeared, and the examination of the *origin*, course, and *insertion* of the muscles, and the pain experienced, convinced me that the disease was muscular, and led to the adoption of a remedy which succeeded beyond my most sanguine expectations.

Fulham, June 6th, 1828.

In the last volume of the Medico-Chirurgical Transactions, Dr. Elliotson* has given the most satisfactory information respecting acupuncture. He says, that of forty-two cases in the Hospital, taken in succession, thirty were cured; the other twelve were clearly not adapted for the remedy, as they were either accompanied or aggravated by heat, which, in Dr. Elliotson's opinion, contraindicates the use of acupuncture. The twelve cases alluded to were subsequently cured by antiphlogistic measures.

USE OF PERUVIAN BALSAM, AS AN APPLICATION TO ULCERS.

A Correspondent, Mr. John Smith, directs our attention to the efficacy of the *Peruvian Balsam*, as a local application to "wounds tending to gangrene, and wounds actually gangrenous." In a case of chancre, situated on the glans penis, with phimosis and extensive ulceration of the foreskin, Mr. Smith employed the balsam with much benefit. The nitric acid lotion had been employed for some time in this case, without effect. With a sloughing wound on the side of the foot, occasioned by severe contusion, the balsam was equally efficacious. The mode in which Mr. Smith applies the remedy, is either by dropping a small quantity into the wound, applying lint over it and a poultice, or by soaking a piece of lint in the balsam.

It is undoubtedly true, that there is a "fashion" in medicine. A remedy which in one age is extolled to the skies, in the succeeding age is thrown aside as utterly worthless, until either by accident or caprice its use is revived—an impetus is given, and it once more "becomes popular."—

---

* Mr. Churchill has also published many excellent cases on the same subject.

There is scarcely an article in the materia medica which has not been subjected to this vicissitude, and the remedy in question, the balsam of Peru, has experienced this fate in a remarkable degree. At one period it was held in high repute as a "detergent" application to wounds and ulcers. Kirkland and Rowley attest its efficacy in high terms of commendation. As far as our experience has gone, the balsam is highly useful in certain kinds of ulceration; the one which we have more particularly in view is the ulcer of the leg, which has a glassy surface, is irritable, and devoid of granulations. Of its utility in gangrenous wounds we cannot speak; a few months since we saw it employed in public practice, in a case of phagadenic ulceration of the labium pudendi, but it produced in this case the most excruciating pain, and was productive of no benefit eventually.

WATER-PROOF CLOTH URINALS.

In a communication from Mr. W. Maclure, of Harley Street, Cavendish Square, we are informed, that a new and useful application of the "Glasgow water-proof cloth" is found in the manufacture of Urinals. This water-proof cloth, of which a Mr. Mackintosh is patentee, according to Mr. Maclure, is composed of two layers of cotton cloth, with "an intervening layer of a glutinous solution of caoutchouc," and it has been extensively used for various purposes, in the manufacture of life-preservers, &c. From its possessing the property of being impervious to air as well as to water, the patent cloth has likewise been used for the making of cushions and pillows, which are so formed as to be readily inflated with air when required. Mr. Maclure justly remarks, that it is somewhat singular surgeons have not availed themselves of the use of this cloth, as there are many cases in which it would contribute greatly to the comfort of the patient, and in none more obviously than in cases of incontinence of urine. The glass, or earthenware urinals, are objectionable, on account of their liability to be broken, as well as on account of their bulk and unyielding nature; and, although they may be used occasionally, they cannot be kept constantly applied, so as to receive the urine when it dribbles from the body. The water-proof-cloth urinal, which is an admirable substitute in such cases, is made of a conical shape, and draws together at the mouth by means of tape. There are attached to it two long and two short tapes; the former, after having puckered the mouth of the urinal around the root of the penis, are passed round the body in opposite directions, and then tied in front. The short tapes are intended for the purpose of encircling the scrotum.

It is further stated, that the urinal may be conveniently worn during the day, which is, indeed, a most important qualification. Care must be taken not to make an aperture in the urinal, in which case it is spoiled; and, to remove the fœtor, which it otherwise acquires by use, it is frequently to be washed in warm water without soap.

CASE OF EPILEPSY, IN WHICH THE MOXA WAS SUCCESSFULLY EMPLOYED.

Mr. R. Wade, of Dean Street, Soho, has recently employed the moxa with benefit, in a case of epilepsy, and also in a case of hemiplegia. The epileptic patient, a delicate girl, 17 years of age, had been subject to occasional fits upwards of four years. When first seen by Mr. Wade, the pulse was 112, small and wiry; extremities very cold; constant pain in the left side, occasionally extending to the back; frequent palpitations; a sense of weight in the head, with giddiness and dimness of sight; a coldness experienced in the right half of the brain, this part feeling heavier than the opposite side; the stomach extremely irritable; the bowels constipated; and the left side of the body paralytic. The nitrate of silver had been given in large doses, as had also the most powerful tonics and antispasmodics. Leeches and blisters had been applied without benefit. The moxa was first used on the 17th of March; three were employed, one over the junction of the occiput with the atlas, and one on each side of the neck; they were allowed to burn slowly, and were held between two and three inches from the part, so as to produce only a slight redness of the skin. It was found on the following day that the convulsions, instead of having occurred in the afternoon, as before the application of the moxa, were deferred till the next morning, and lasted only half the usual time. The moxa was used daily for two months, and the patient progressively improved, becoming stronger, and having no fits. On the 15th of May she complained of pain in the cardiac region, and was cupped; the use of the moxa was still persisted in, but on the 29th of May, the patient had a fit. From the latter period to the 25th of April in the ensuing year, the moxa was occasionally applied, gradually lengthening the intervals of its use. There was no return of the fits, and the girl entirely recovered her health.

At the time when the affection of the head was most distressing, the immediate relief afforded by the moxa was extremely satisfactory; the patient said, that after its application, her ideas became vivid, and she experienced a throbbing in the right half of the head; a gradual warmth succeeded the coldness, and in a few minutes this side felt like the other.

THE LANCET.

London, Saturday, June 21, 1828.

Dr. Forbes has just published a statement of the circumstances which led to his resignation of the office of Physician to the Westminster Eye Infirmary. This pamphlet may be regarded as a supplement to his former statement, in which he gave a minute detail of the circumstances connected with the unsuccessful attempt to effect the suppression of his testimony, in the action commenced by Mr. Guthrie against this Journal. Our analysis of that statement was acknowledged, even by those who were disposed to view the conduct of Mr. Guthrie in the most favourable light, to admit only of one answer; namely, the negation of the facts detailed in Dr. Forbes's statement, from which our inferences were, step by step, deduced. This method of reply was accordingly resorted to, and at a special meeting of a Committee of the Westminster Eye Infirmary, composed of six vice-presidents, out of thirty who belong to the charity, and nine members, out of upwards of three hundred, it was resolved, that the statement respecting the change of the hours of attendance at the infirmary, and that respecting the person denominated house-surgeon, which statements implicated the honour and veracity of Mr. Guthrie, were both *false*. It was, moreover, stated, that, before adopting these resolutions, the Committee called in several witnesses, and examined such papers as were calculated to throw light upon the subject.

So far, so good. Mr. Guthrie's honour, in so far as it was affected by these statements, appears, in the opinion of this Committee, to have been satisfactorily vindicated; but at whose expense was it vindicated? The statements are distinctly alleged by the Committee to be false, and to whom is the falsehood imputed? We had occasion to observe, last week, that whenever we detect a desire to conceal, we may fairly predicate the existence of fraud; and we beg our readers to bear this proposition in mind, while we call their attention to the manner in which the Committee introduce the statement respecting the change of the hours of attendance which, after the examination of witnesses and papers, they resolve to be false. Do they fairly state the authority on which this statement rested? Have they the manliness and the honesty to name the individual who had printed and affixed his name to the statement? No! they introduce it by stating, that "the following paragraph from The Lancet, of the 8th of March, page 834, was submitted to the Committee," and then proceed, without naming Dr. Forbes, against whom their resolutions were in reality directed, to declare that this statement is *false*.

We have no hesitation in declaring, that this cowardly suppression of the name of Dr. Forbes, and the attempt to fix this Journal with the responsibility for a statement, of which the framers of these resolutions knew Dr. Forbes to be the author, throw a taint of suspicion upon the whole proceedings of this Committee. Dr. Forbes, in the statement just published, makes the following observations on this paltry manœuvre:—

"The passage called a 'paragraph from The Lancet,' is, in truth, a passage from my 'Statement,' already referred to, as published in that Journal on the 8th of March. This was well known to those, with whom the proceedings of the 8th of April originated; but it was thought necessary, in the first instance, I suppose, that the blow, though really intended for me, should apparently be aimed at another. Some members of the Committee, indeed, to whom I have been long and estimably known, might, otherwise, have hesitated before consenting to a resolution, which had for its real object to charge *me*, in direct and offensive terms, with having stated that which was untrue. In fact, one of the members present on that occasion, Mr. Stewart, publicly declared in the Committee of the 28th of May following, that he was completely in the dark as to the true aim of the former Committee,

or he should never have assented to their decision."

This declaration of Mr. Stewart, by the way, discloses rather a curious fact, and tends, at the same time, to establish our position, that concealment is almost invariably the offspring of fraud. Mr. Stewart, it seems, was, in point of fact, deceived by the language of the resolutions, and cheerfully acquiesced in a vote imputing falsehood to THE LANCET, which he would never have assented to, had he been aware that the object at whom the blow was really aimed was Dr. FORBES. Verily we are much indebted to this Mr. Stewart, and we cannot forbear repaying, in some sort, the debt which he has cast upon us, by offering our grateful homage to the pure and conscientious principles which appear to have influenced his decision. Mr. Stewart has as much reason to complain of the conduct of the Committee, as his friend Dr. FORBES; for he has clearly been entrapped into delivering a verdict of guilty, under an erroneous impression, as to the party whose character was to be destroyed. It is plain that this gentleman could have taken no part in the examination of witnesses and documents, and that the confidence which he placed in the insinuation of the Committee, that THE LANCET was the object of censure, has been artfully abused. Ready as this most righteous judge must have been to dismiss from his mind all consideration of the matter charged, and to consider only who was the party inculpated, it is grievous to reflect that such singleness of character should have been imposed upon. Whether Mr. GUTHRIE will still be disposed to regard, as one of his compurgators, a gentleman who declares that he only testified to the falsehood of Dr. FORBES's statements, on the supposition of those statements having been made by THE LANCET, is a point upon which we will not attempt to decide. If a *locus pœnitentiæ* be conceded to Mr. Stewart, the number of members who, besides six out of thirty vice-presidents, agreed to the resolutions, will then be reduced to eight.

But whatever may be the weight attached to these Resolutions, and whatever undue influence may have been exercised over the small Committee which passed them, they refer to points of comparatively trivial importance, and do not in any degree affect the main question in which the public was interested, namely, the attempt to obtain a verdict against a public journal, by the suppression of evidence which would have been fatal to the cause of action. That fact is established beyond the possibility of contradiction, and it may prove of singular benefit, not merely to the interests of this Journal, but to the cause of the liberty of the Press, which is inseparably connected with the interests of the community, that such an attempt was made, and that it failed in consequence of the refusal of Dr. FORBES "to lend himself to withhold evidence,"—we use his own expression—"unfavourable to the cause of Mr. GUTHRIE."

It appears from Dr. FORBES's statement, that in consequence of the resolutions adopted at the meeting of the 2d of April, he tendered, in a letter to the Committee, his resignation of the office of Physician to the Westminster Eye Infirmary, declaring, however, at the same time, that those resolutions were founded *upon a supposition entirely false*. His resignation, couched in these terms, was twice refused by the Committee, but it was accepted, when subsequently tendered in a formal note, addressed to Lord Grantham, the President.

Dr. FORBES further states, that, while his papers were at press, he received a communication from Mr. GUTHRIE, proposing, "as their differences were professional, and not personal, first, that they should meet with one friend each, at any place Dr. Forbes would select, and, after a gentlemanly discussion, leave their two friends to draw up such written document, which they

should both sign, as would be alike honourable to them and *final*;" or, secondly, "that they should meet and settle their misunderstanding in a way becoming their rank in the service." To this communication Dr. FORBES replied, "That, after all that had passed, and *the measures that had been* taken in these unpleasant differences on both sides, it would be entirely futile for the parties themselves, thus late in the day, to enter into any private proposals whatever, and that he (Dr. FORBES) now considered it more incumbent on him than ever, to leave the public and the friends of the Charity, to form their opinion of his conduct, which he entertained no apprehension would either be discreditable to himself, or prejudicial to his professional reputation."

Upon this part of the statement we shall merely observe, that if Mr. GUTHRIE's second proposition is to be construed as warlike, we perfectly agree with Dr. FORBES, that it is much too late in the day to hint at such an alternative, especially as Dr. FORBES has already exposed his person in a contest, on Mr. GUTHRIE's account, with a *third party*, to whose conduct and office on the occasion we allude to, we do not choose to give the appropriate designation. We should have abstained from making even this observation, on a matter which we should have held to be of a private character, had it not been for Mr. GUTHRIE's declaration, that he considers the differences between himself and Dr. FORBES as of a professional, and not a personal, nature.

With respect to the points at issue between Dr. FORBES and Mr. GUTHRIE, though they certainly involve the veracity of these gentlemen, they are of but little public importance, and some of them, from the absence of other evidence than the conflicting allegations of the parties, do not admit of being decided. Veracity, in the absence of testimony, is not a quality to be determined by a show of hands. A Committee of fifteen members of the institution, including Mr. GUTHRIE, can no more establish, by a resolution, the falsehood of Dr. FORBES's statements, than a Committee composed of Dr. FORBES's friends could demonstrate, by a counter-resolution, the falsehood of Mr. GUTHRIE's. Under such circumstances, it is to be regretted that the interests of a charitable institution should have been sacrificed to the desire, which appears to have animated a very small portion of its members, to uphold the credit of one medical officer of the establishment, by aiming a blow at the honour of another. We concur, for the most part, in the view taken of this subject by Lord LONDONDERRY, who has withdrawn his name from the Institution, in consequence of the resolutions of the Committee. We regret that we have not space, at present, for the whole memorandum, transmitted by that Noble Lord to the Committee, in which he states his reasons for withdrawing from the Institution; but the following observations will enable our readers to judge of the candour and good sense by which this document is characterised.

"I must be permitted to remark that, if any serious charge existed, either of professional mismanagement or a breach of moral conduct in the principal officer of a great public institution, composed largely of military officers, who, for twenty or thirty years, could vouch for the professional character and ability of such public officer, due notice should have been promulgated of the nature of the charge, and inquiry proposed to be established, to have ensured a full attendance.

"If incapacity was alleged, other professional men, unconnected with the institution, might have been examined. If moral turpitude was the accusation, full time for all subscribers ought to have been afforded, interested in the institution and in the parties, to attend, that the most impartial decision should have been obtained.

"Whereas, upon the committee which took place on the 2d of April, six vice-presidents, out of thirty who belong to the charity, were present, and nine members out of upwards of 300.

"With all due respect for the committee, it appears to have been very suddenly formed for so grave a proceeding; and to establish such a verdict as, that a statement is FALSE (vide committee proceedings),

upon a point of a very trivial nature, as connected with the real good of the charity, and which possibly could only have been known to Mr. Guthrie and Dr. Forbes themselves, seems, in my humble judgment, a very severe and cruel measure."

EXCLUSION OF "PERPETUAL" PUPILS FROM GUY'S HOSPITAL.

A CORRESPONDENT, who subscribes himself "A General Practitioner, and a PERPETUAL Pupil to Guy's Hospital," has addressed a very spirited and sensible letter on the subject of the impotent attempts recently made at Guy's Hospital to revive the "Hole and Corner" system of surgery, by the threatened exclusion of pupils suspected of reporting cases. Our Correspondent asks whether the pupils are really so pusillanimous and abject, so destitute of manly feeling, as tacitly to submit to an invasion of their rights by men who enrich themselves from the purses of the students? The only answer to this is, the humiliating fact, that such is the case. "About three years since," says our Correspondent, "I became a dresser for twelvemonths at Guy's Hospital, for which I paid the sum of 51*l.* 10*s.*, with some additional fees to servants. I was at this time positively and distinctly informed by Browell, the steward, that I was *entitled* to attend the hospital practice as long as I pleased. How great, then, was my surprise at hearing the same steward state a few days since, that a pupil was *not* entitled to attend the hospital practice after the expiration of twelve months, unless by *courtesy*—by *permission* of the surgeons." That a paid menial should act the character of Polonius—should say and gainsay at the will of his master, is not extraordinary. But it is not with such underlings that we have to deal, and we may here remark, that it is not the hardship experienced by any particular individual being excluded from the Hospital to which we look so much, as to the principle which such an act involves. The tendency—the purport of exclusion, clearly is to stifle the voice of the free medical press; but impotent, futile, and absurd, as the attempt may be, it is not the less diabolical, nor are the abettors of it less deserving of reprobation and scorn. If they fail, as assuredly they will, in reviving the "Hole and Corner" system, it is not from want of disposition, but from lack of power. As well might the hospital surgeons attempt to stay the ebbing and flowing of the tide, or "cover the moon with a blanket," as to prevent the publication of reports.

SUPPLY OF WATER IN THE METROPOLIS.

The Dolphin, or Grand Junction Nuisance, proving that Seven Thousand Families in Westminster and its Suburbs are supplied with Water, in a State offensive to the Sight, disgusting to the Imagination, and destructive to Health. 1827. 12mo.

Report of the Commissioners appointed by His Majesty to inquire into the State of the Supply of Water in the Metropolis. April 21, 1828, pp. 154. folio.

The Water Question; Memoir addressed to the Commissioners appointed by his Majesty, to inquire into the State of the Supply of Water to the Metropolis. By J. WRIGHT. 8vo. pp. 53. Jan. 1828.

An Investigation of the Properties of the Thames Water. By WILLIAM LAMBE, M.D., Fellow of the Royal College of Physicians. Underwoods. 8vo. 1828.

Remarks on the Supply of Water to the Metropolis; with an Account of the Natural History of Water in its Simple and Combined States; and of the Chemical Composition and Medical Uses of all the known Mineral Waters; being a Guide to Foreign and British Watering Places, &c. &c. By MICHAEL RYAN, M.D. Longman and Co. 8vo. 1828.

TOWARDS the close of the year 1826, the attention of the public was directed to the

state of the water supplied to the inhabitants of this immense and unrivalled city. This was effected by the meritorious exertions of a single individual, Mr. Wright, of Regent Street. This gentleman addressed a letter to the patriotic and highly distinguished member for Westminster, Sir Francis Burdett, who, with his wonted and unremitting attention to public welfare, thought the subject one of great importance, and recommended a public meeting of the aggrieved inhabitants, who were principally his constituents. Thus encouraged, Mr. Wright collected and published a number of facts, proving the insalubrity and impurity of the water, which was daily used in the metropolis, and he entitled the pamphlet "The Dolphin." The object of the author may be readily seen, by referring to his title prefixed to this article. He most truly observes,

"That, at a moment like the present, when both the Legislature and the Government are endeavouring to unfetter the commerce of the country, by removing oppressive prohibitions and inconvenient restrictions, and thereby giving greater facility and encouragement to the skill, the capital, and the industry, of the people of England—that, at such a moment, there should exist, in the very seat of that Government, a monopoly of an element of nature, cannot but be matter of just astonishment.

"The highest legal authorities have long ago denounced all such monopolies, as being not only contrary to the ancient and fundamental laws of the realm, but injurious to the public: in the first place, by invariably raising the price of the article monopolised; and, secondly, by deteriorating its quality. Numerous, too, have been the acts passed by the Legislature, for the punishment of such as shall be guilty of creating a monopoly of any kind, but especially a monopoly of any of the necessaries of life.

"The sale of provisions in an unsound, corrupted, and unwholesome condition is, by the law of England, considered an offence against the public; and statute upon statute have been passed to prevent it. But the insatiable thirst of gain has ever been proof against prohibitions and penalties; the possible and probable sacrifice of a fellow creature, being a secondary consideration with these sordid assailants of human life."

The author then proceeds to expose the monopoly of the five water companies, and the evils that the public suffer from them. He next describes the properties of good water, the importance of its purity, its salutary effects, and the fatal consequences of using bad water; and, in proof of his assertions, on the last part of the subject, he quotes the opinions of some of the most eminent members of the medical profession, who unanimously agreed as to the gross impurity of the fluid in common use, and its unfitness for culinary and domestic purposes. The concluding part of the volume is on the abatement of the nuisance, and on the best mode of procuring a supply of pure and wholesome water for Westminster and its suburbs. Immediately after the appearance of "The Dolphin," one of the companies put forth an advertisement in "The Times," pledging themselves to prove, on oath, "the charges in that publication were as false as they were malignant," "that the author was an anonymous slanderer, and his book a most wicked publication." However, Sir Francis Burdett gave notice in the House of Commons, "that he would shortly call the attention of the House to the state of the supply of water, in the western part of the metropolis." A public meeting of all the rank and respectable inhabitants of that peculiar district took place, when a series of resolutions were entered into, among which it was resolved,

"That the water taken up from the River Thames, at Chelsea, for the use of the inhabitants of the western portion of the metropolis, being charged with the contents of the great common sewers, the drainings from dung-hills and lay-stalls, the refuse of hospitals, slaughter-houses, colour, lead, and soap-works, drug-mills, and manufactories, and with all sorts of decomposed animal and vegetable substances, rendering the said water offensive, and destructive to health, ought no longer to be taken up by any of the water companies, from so foul a source."

And petitions were presented to both Houses of Parliament, praying that a commission might be appointed by his Majesty

to inquire into the supply of water in the western part of the metropolis, and the commission was immediately granted. The attention of the commissioners was directed to three principal points, namely,

"First, to ascertain the *sources* and *means* by which the metropolis is supplied with water, and their efficiency as to the *quantity* supplied; secondly, to determine the *quality* of the water; and, thirdly, to obtain such information as might enable them, if necessary, to suggest *new methods* or *sources of supply*, or to point out the means of ameliorating those now in existence."—*Report*, p. 3.

"The supply of this, (the western,) the most extensive portion of the metropolis, is dependent upon five companies, which, arranged in the order of the number of tenants they serve, and nearly in that of the quantity of water which they respectively furnish, stand as follows:—

The New River,
The East London,
The West Middlesex,
The Chelsea, and
The Grand Junction Companies.

"Of these companies, the New River derives its principal supplies of water from a spring at Chadwell, between Hertford and Ware, and about twenty-one miles north of London; and also from an arm of the River Lea, the source of which is near the Chadwell Spring, in the proportion of about two-thirds from the former, and one-third from the latter. These united waters are conducted by an artificial channel nearly forty miles in length, to four reservoirs, called the New River Head, at Clerkenwell; proper means being adopted to prevent the ingress of fish and weeds, and such arrangements being made in respect to the mains, as to prevent interruption of service in case of repairs. Since, however, the abandonment of the London Bridge, and of the York Buildings Waterworks, whose former districts are now supplied by the New River Company, they have found it advisable to erect an engine at Broken Wharf, Thames Street, by which they are enabled occasionably to supply parts of their district with Thames water, when, from long continued droughts, severe frosts, or other accidental causes, the flow of the New River is impeded. It appears, however, that the quantity of Thames water thus supplied, bears a very trifling proportion to the other source, the engine at Broken Wharf having been worked for seventy-six hours only, in January and February of last year, and for 100 hours during the drought of July and August. The number of tenants supplied by the New River Company is between 66,000 and 67,000, and the quantity of water, which is daily supplied, exceeds 13,000,000 of gallons, being about 2,000,000 of cubic feet.

"The East London Water-Works are situated at Old Ford, on the River Lea; but as the tide of the Thames flows up that river to the extent of a mile beyond the works, and as their supplies are taken during the ascending tide, the description of water thus furnished will closely approximate to that of the Thames. This Company has four reservoirs; the number of tenants supplied amounts to about 42,000, and the daily consumption of water to nearly 6,000,000 of gallons, or about 950,000 cubic feet.

"The West Middlesex Water-Works are upon the banks of the Thames, at the upper end of Hammersmith, and draw water exclusively from that river, opposite to the works. They have two reservoirs, one at Kensington, and one at Little Primrose Hill, which are supplied by the engines at Hammersmith, and they serve about 15,000 tenants. The average daily consumption of water is 2,250,000 gallons, or about 360,000 cubic feet.

"The Chelsea Water-Works are upon the banks of the river, about a quarter of a mile east of Chelsea Hospital; and their supplies are derived entirely from the Thames, opposite to their works. They have two reservoirs, one in Hyde Park, and one in the Green Park, close to Piccadilly. They supply about 12,400 houses; the average daily supply to the whole being about 1,760,000 gallons, or nearly 282,000 cubic feet.

The works of the Grand Junction Company are also at Chelsea, immediately adjacent to, and east of, the hospital. They derive the whole of their supply of water from the River Thames, with which they fill three reservoirs situated at Paddington, and from these their district is served. The number of their tenants does not appear to exceed 7,700; but their daily consumption of water is about 2,800,000 gallons, or upwards of 450,000 cubic feet.

"It appears from this statement that the portion of the town upon the north side of the River Thames, including the cities of London and Westminster, is supplied daily with a quantity of water amounting to nearly 26,000,000 of gallons, and that the total number of houses and buildings receiving this supply amounts to about 144,000. The water is, of course, very unequally distributed, the average consumption in each house being apparently greatest in the district supplied by the Grand Junction Company, where it amounts to about 363 gallons daily per house. Taking the average of the

whole supply, the daily consumption of each house is about 180 gallons. Of this water, more than one half of which is derived from the Thames, a large portion is delivered at very considerable elevations above the level of the river, constituting what is called *high service*; for which purpose fifteen steam-engines are employed, exerting a power of about 1,105 horses.

"It is obvious, from the above statement, that the *quantity* of water supplied in London and Westminster is abundant; and in our examinations of individuals touching the quality of the water, we have in no instance met with complaints of deficiency in quantity. We have reason to believe that the hospitals, workhouses, and other similar establishments, where an abundance of water is an essential requisite, are, in all cases, duly supplied; and upon the important subject of supply in case of fire, our evidence leads us to believe that of late it has always been ample, and that when not immediately procured, the fault has lain with the turncocks; for, among other advantages of the reservoirs annexed to the works upon the Middlesex side of the river, is that of having at command a large head of water, by which the mains are kept full, and, in many districts, are under considerable pressure. The supply of a large quantity of water upon any sudden emergency is thus ensured; and among other great advantages arising out of the substitution of iron for wooden mains, is that of their sustaining the pressure of a column of water which it would have been impossible, in the former state of the works, to have commanded.

"As far, therefore, as regards the description and quantity of water supplied to the cities of London and Westminster, it appears that more than half the consumption is derived from the Thames, and that it is in such abundance, as not only to supply all necessary demands upon ordinary and extraordinary occasions, but that a proportion is constantly suffered to run to waste, by which the cleansing of the drains of houses, and of the common sewers, is effectually accomplished; all accumulations of filth obviated; and the general healthiness of the metropolis promoted.

"We next proceeded to examine into the supply of water to those parts of the metropolis situated upon the south side of the river, including the borough of Southwark. We found that they are dependent upon three establishments, known as

The Lambeth,
The South London, and
The Southwark Water-Works.

"The first of these is upon the banks of the Thames, between Westminster and Waterloo Bridges, drawing its supplies from the river immediately opposite to the works. They have no reservoir, the water being forced immediately from the river into the mains, and thence distributed to about 16,000 tenants, who consume 1,244,000 gallons daily, or nearly 200,000 cubic feet.

"The Vauxhall, or South London Water-Works, are situated in Kennington Lane, and have also an engine on the river at the foot of Vauxhall Bridge. They supply Thames water exclusively, and have reservoirs for the service of their upper engine. The number of their tenants is about 10,000, and the daily consumption of water about 1,000,000 of gallons, or about 160,000 cubic feet.

"The Southwark Water-Works are upon the bank of the river, between Southwark and London Bridges, and derive the whole of their water from the middle of the river opposite to their engines. It appears that about 7,000 tenants are supplied by this establishment, with about 720,000 gallons of water, or 115,000 cubic feet daily.

"Each of these establishments has two engines, the aggregate power of the six may be estimated at about 235 horses. The whole of the water which they supply amounts to nearly 3,000,000 of gallons, or 485,000 cubic feet daily, which is distributed among 33,000 tenants.

"There appear to be no just complaints respecting the quantity of water furnished by any of these companies, except in cases of fire, when there has occasionally been a serious deficiency. We have inquired into the causes of this, and are induced to refer it to the want of proper reservoirs for preserving a head of water upon the mains, when the engines are not working. On these occasions much time is often lost in sending to the engine of the district, and if the steam be not up, and the fire low, further and fatal delay sometimes occurs.

"In reference to the total amount of the quantity of water required for the daily supply of the inhabitants of the metropolis, and for the use of the various manufactories requiring it, it appears to be about 29,000,000 of gallons, or 4,650,000 cubic feet."

The Commissioners next directed their attention to the *quality* and *salubrity* of the water, with which the inhabitants of London are supplied, and endeavoured to form a correct and unprejudiced opinion on this part of the subject. The first confine themselves to the water of the Thames, and state that

"The weather will materially affect the purity of the water, which is sometimes comparatively clean and clear, and at others

loaded with various matters in mechanical suspension, rendering it more or less coloured and turbid. In the latter state, when thrown into cisterns, and other receptacles of houses, it is manifestly unfit for immediate use; but after being allowed to rest, it forms a certain quantity of deposite, and thus may become sufficiently clear for ordinary purposes. This deposite, however, is the source of several evils; it renders the cisterns foul, and runs off into those pipes which issue from or near the bottom of the reservoirs. By the agitation which accompanies every fresh influx of water, this deposite is constantly stirred up, and becomes a renewed source of contamination to the whole mass; and although chiefly consisting of earthy substances in a state of minute division, it is apt also to contain such proportion of organic matters as will occasion a degree of putrefaction when collected in any quantity, and especially in warm weather. Of this deposite, more or less is almost always collected, especially where the service is direct from the river; and although some of the companies have reservoirs of such magnitude as to enable them to serve water already partially purified by deposition, the system is still very imperfect, and the water is frequently supplied in a turbid state. In other cases, the companies' reservoirs, however eminently useful in cases of fire, become objectionable in regard to the purity of the water, since the mud accumulates in them, and also proportionately in the mains and branch pipes."

The Commissioners then report, that the water of the Thames may be filtered by passing through beds of sand in the river, and be rendered pure; and with such rapidity, as not to interfere with the regularity of service. They observe, however, that

"It must be recollected, that insects and suspended impurities only, are separated by filtration, and that whatever substances may be employed in the construction of filtering beds, the purity of the water as dependent upon matters held in a state of solution, cannot be improved by any practicable modification of the process. If, therefore, it can be shown, that water taken from the parts of the river whence the companies draw their supplies either is, or is likely to be, contaminated by substances dissolved, or chemically combined, it will follow that the most perfect system of filtering can effect only a partial purification."

They next had specimens of the water taken from different parts of the river, at different times of the tide, especially at those parts at which the Companies derived their water, and also in situations where the tide can have no influence on it, and from those parts where it is said to have been impregnated with copper from the bottoms of the ships; and those specimens were submitted to the eminent chemist, Dr. Bostock, for analysis; and the conclusions he deduced are expressed in the following passage:—

"'It appears that the water of the Thames, when free from extraneous substances, is in a state of considerable purity, containing only a moderate quantity of saline contents, and those of a kind which cannot be supposed to render it unfit for domestic purposes, or to be injurious to the health. But as it approaches the metropolis it becomes loaded with a quantity of filth, which renders it disgusting to the senses, and improper to be employed in the preparation of food. The greatest part of this additional matter appears to be only mechanically suspended in it, and separates by mere rest. It requires, however, a considerable length of time to allow of the complete separation; while, on account of its peculiar texture, and comminuted state, it is disposed to be again diffused through the water by a slight degree of agitation; while the gradual accumulation of this matter in the reservoirs must obviously increase the unpleasant odour and flavour of the water, and promote its tendency to the putrid state.

"'Regarding the greatest part of the extraneous matter in the Thames as mechanically mixed with it, we may conceive that a variety of incidental circumstances will affect its quantity in the same situation, and under the same circumstances of the tide; but the observations are sufficiently uniform to warrant us in concluding, that the water is in the purest state at low tide, and the most loaded with extraneous matter at half ebb. It would appear, however, that a very considerable part, if not the whole, of this extraneous matter may be removed by filtration through sand, and still more effectually by a mixture of sand and charcoal.'

The Commissioners report, that the water in the London district has suffered deterioration within the last ten or twelve years; that fish will not exist in certain parts of the river, and that it is impossible to preserve live fish, for any length of time, in water taken from the same district.

"The causes of these impurities are, perhaps, principally to be traced to the increase of certain manufactories, amongst

which those of coal gas are the most prominent, polluting the river by their refuse; to the constant passage of steam-boats, by which the mud is stirred up, and to the peculiar nature of that mud within the above-mentioned precincts. The very circumstance also of the great abundance with which water is supplied to the houses and manufactories of the metropolis, appears to be essentially connected with the augmented impurity of the river; for where refuse animal and vegetable matter of various descriptions used to be collected, and from time to time removed for the purposes of manure, it is now indiscriminately washed into the sewers, and conveyed into the Thames: and the sewers themselves are rendered much cleaner than formerly by the quantity of water which runs to waste, and which, as already remarked, has rendered them less offensive, especially in those parts of the town where they used to be most liable to stagnation and consequent putrescence. Thus it has been stated to us that the water of the river is more polluted immediately after heavy rains, which force down the contents of the sewers, than after a continuance of dry weather, when its course is sluggish or altogether arrested; and the results of experiments we directed to be made on the subject fully establish this fact. The great increase which has of late years taken place in the population of London, and of its suburbs on every side, must also be attended by a proportionate augmentation in the quantity of extraneous matter carried down into the Thames."

To these causes may be added, the position of the suction pipes of the engines belonging to some Companies, with regard to the mouths of the sewers, to the quantity of dead animals thrown into the river, to the various other sources of impurity which need not be mentioned. It is manifest, that if the general quality of the river water be objectionable within the whole district, whence the supplies for the metropolis are drawn, any remedies for local evils become comparatively unimportant. The Commissioners allege, that it is difficult to trace bad effects of the water on the human constitution, and there is a strong suspicion, even when filtered in the beds of sand, of its insalubrity. It is said, that there are no grounds for improvement in the state of the water drawn from the London district of the river. The New River Company is not open to the same objection as the Thames, but is still susceptible of improvement; if the Company could prevent persons from bathing, as they have laudably endeavoured to do, by offering a sufficient supply of water for that purpose, they would effect great improvement. Taking all the evidence, which occupied 132 folio pages, into consideration, the Commissioners are of opinion, that the supply of water is susceptible of, and requires, improvement; that the complaints concerning its quality are well founded; that it ought to be derived from other sources than those now resorted to, and guarded by such restrictions as shall at all times ensure its cleanliness and purity. The time allowed the Commissioners was too limited to enable them to form a correct opinion on any of the plans proposed for improvement, a subject which they had contemplated much. They cannot refrain from expressing their earnest hope, that its full investigation by competent persons will not be long deferred. The Commissioners were restricted by Mr. Peel from inquiring into the compacts agreed upon by the several water companies on the Middlesex side of the Thames, as a select Committee of the House of Commons had been appointed for that purpose in 1821; but the Commissioners observe, that the supply of water ought not to be confined to monopolising Companies, and that, at present, their proceedings ought to be subjected to some effective superintendence and control. It appeared from this inquiry, that there was an abundant supply of water, and hence Mr. Peel contended, that the subject ought not to be taken up by government, but left to the public. But the public complaints were urged, not as to deficiency of quantity, but as to the deterioration of the water supplied, and hence there has been a public meeting since the discussion in Parliament, and there is not a shadow of doubt that the evils complained of must be speedily and completely remedied.

JEMMY JOHNSTONE.

To the Editor of the late MEDICO-CHIRURGICAL REVIEW.

"I call thee coward! I'll see thee damned ere I call thee coward!" but if the "*omission of cancel*" at page 583 of your Number for October last is not as *pale-faced* a specimen of that "*discretion*" which is the "*better part of valour*," may I be damned instead of you, and the devil for once be cheated of his due. The fat knight of facetious memory cowled to the "*true prince*" "*upon instinct*;" but "*what instinct hadst thou for it*," most *discreet* friend? I will tell you; it was the *instinct of self-preservation*, roused by "*the notice of legal proceedings*," and called into action by the resuscitated pangs of the pocket; that grovelling instinct which keeps up the stock of knaves and poltroons in the world, and which induces the lips to kiss, what the foot was raised to kick, but dared not! Let us examine into this matter a little.

When THE LANCET first became a candidate for public patronage, you, in all the puffed-up pride of fancied power and assumed merit, were amongst the first to cast the stone of envy and detraction; but when you saw it probable that you might suffer from the rebound, you rested satisfied with your *coup d'essai*; you abided, with the most Job-like patience, the pitiless pelting of the storm, which your indiscretion had provoked, and went on munching your cabbage stalk with the most asinine endurance, until some unseen hand (you have read the Sentimental Journey!) let fall such a thundering bastinado upon your crupper, that with an "out upon it, cried I," you brayed forth "*to those whom it may concern*," and paid SEVEN HUNDRED POUNDS for your frolic! I remember that when a boy, we had a trick of slitting the tongue of a certain chattering bird called a magpie, for the purpose of making him jabber; but although this is an excellent receipt for setting a silly bird's tongue agoing, yet the wisdom of Solomon himself could never hit upon an expedient for keeping a fool's tongue quiet; in our degenerate days, the experiment has been tried, by making him *pay* pretty smartly for the exercise of it; but even this does not always succeed, especially when he prates upon paper. There is an animal still more inveterate in the use of the language which God has endowed him with, than even the fool who writes "*Scribbler*" at the end of his name. "*Am I not thine ass*," was the pithy annunciation which it once required a miracle to extort from him, but which it would now be miraculous indeed for any one of his congenus to keep to himself. In a part of the globe of which I have heard, the natives, having somewhat sensitive ears, are addicted to bore a neat little circular aperture in each of this patient creature's nostrils, the consequence of which is, that his efforts are all still-born, and that although he *looks* every inch what he is, yet his *voice* ceases to betray him, and to a blind man, or under the shadows of night, he may pass muster along with other beasts—*verbum sat*; do you avail yourself of the hint: it may be even yet a hundred pounds in your way, and should any of your friends wonder at your muteness, and your nasal perforations, you will still have your *ears* left in self-defence; and should you happily keep to windward of the pillory, may carry with you to your grave these tokens of legitimacy. I am, however, *tickling*, when I ought to *cudgel*—allons. In that unfortunate, that *dearly paid for*, "*To those whom it may concern*," (you remember it, do you not? 'twas in your Number for April 1826, page 599,) you called the editor of THE LANCET and his coadjutors, "Outcasts of medical society"—"men who have been accused of arson"—"convicted of libel"—"literary robbers"—"disgraces to the profession"—"obscene"—"slanderer"—"preyers on garbage"—"dealers in legerdemain"—"pilferers"—"pandars"—"without conscience, principle, or rectitude," &c.; at page 585 of the same Number, you mentioned *by name*, "Mr. Wakley, editor of THE LANCET," adding in a note, "Next to the approbation of honourable minds, we prize the maledictions of those who have no honour to bestow," &c. So far so good; you of course *believed* all you uttered, and your *conscience* not allowing you to keep your belief to yourself, you suffered martyrdom for your faith, to the tune (as I have said before) of "SEVEN HUNDRED POUNDS;" but in a late Number (that for October, 1827, page 583,) it appears that you invited the "hundred pound" martyrdom merely for the fun of the thing; that all those foul words were intended for "no abuse—none, 'pon honour;" that you *believed* the Editor and his crew to be "all honourable men," and merely "dispraised them before the wicked, that the wicked might not fall in love with them;" for you there say, (October, 1827,) "We have no hesitation in declaring that we know nothing of Mr. Wakley personally, nor of any circumstances which can justify the above allegations, &c., and that we believe the said allegations to be without foundation;" in other words, you declare publicly, in 1827, that the vile, abusive, and scandalous language which you used in 1826, was as false as it was abominable, and that in addition to culprits, convicted and punished offenders against the laws of your

country; you are, by your own admission, *malicious liars* of the first magnitude! and for this character you have paid SEVEN HUNDRED POUNDS of lawful money of the realm; verily you have bought a good pennyworth, and may you make the most of it; consummate the deed by putting yourself to the small extra charge of a halter, and commit suicide in self-defence! for never again can you hold up your head before men.

If you believed what you asserted in 1826, you *must have believed* the same in 1827, for nothing had occurred to change your belief. If you *did not believe* your assertions of 1826, how *dared you*, as an *honest* man, (setting the *prudence* of the thing aside,) to make them! And if you *still believe* them, the Lord avert from you "*the deep damnation*" of your recantation—in "*the catalogue*" you may still "*go for a man,*"

> "As hounds and greyhounds, mongrels, spaniels, curs,
> Shoughs, water-rugs, and demi-wolves, are ycleped
> All by the name of dogs."

But, like Cain, you will carry your curse about with you, and pay dearly for the privilege.

CASTIGATOR.

Lisbon, April 20.

P.S. I do "love to see the engineer hoist by his own petard." In turning to p. 584, under the head "HOSPITAL REPORTS," I find, "We shall not condescend to argue with these petty *tyrants* (some physicians and surgeons who have prohibited you from the publication of their cases). They dare not allow records of practice to see the light, unless *manufactured* by themselves, &c. They are on the eve of annihilation, and even the short span of their *worthless existence* will surely be embittered by the complete frustration of their *feeble, selfish,* and *unchristian* endeavours to cramp the, &c. Let them not (the reporting students) be intimidated by the threats of a few individuals, whose *utter* and *reckless disregard* for all public utility, for all *honourable distinction*, in short, for all things but *selfish, paltry, pitiable self*, &c. Students, &c. are under no obligation to consult the opinion or solicit the sanction of *moles*! who hate the light, of *incubi*!! &c., of *upas trees*!! &c., of *vampires*!! &c.; in fine, of a few remnants of *vandalism*!!! &c.

Now had *we*, who have always been in the habit of "calling things by their *right* names," a spade being to us a spade all the world over; had *we*, I say, written the above, there would have been nothing in it; but that *you*, the chaste, the mild, the gentlemanlike editor of the Chirurgical, that *you*, in whose mouth sugar would hardly have melted, should have "condescended" to call men "moles"—"incubi"—"vampires"—"upas trees"—"unworthy of existence"—"unchristian"—"dishonourable," &c., and that I should happen to have stumbled upon this *petit morceau*, and to have introduced it afresh to your recollection, in the same columns with your never-to-be-forgotten, "*To those whom it may concern,*" with its meek, lamb-like adjuncts of "libellers"—"robbers"—"outcasts"—"slanderers"—"pilferers"—"panders"—"prayers upon garbage"—*cum multis aliis*—is certainly something rather extraordinary; but what will you say, or more properly, what will *those say who are to pass judgment upon you*, and from whose sentence there is no appeal, when OUT OF YOUR OWN MOUTH, and at page 564 of this same Number, I convict you of "bullying, defamatory, and blackguard language," (your own words,) "such as threatens to place the medical character in the eyes of the world on a level with that which it obtains in Spain," &c. It does behove you, indeed, (your own words again,) "To reflect that you belong to a profession which has been termed liberal;" and it is quite impossible (still your own words,) "That these terms can continue long to be applied by a public which witnesses with astonishment the degrading scenes which every day occur in what used to be called medical literature, (i. e. writing men down *panders, pilferers, incubi, vampires*, &c.,) but which now more resembles the sanguinary conflicts of gladiators, than the sober discussions of science, (i. e. did this *not*, page 532, ever happen, &c.!) It can indeed ('I thank thee, Jew, for teaching me the word') no longer be said of medical science (in the garb of the Chirurgical,) that, emollit mores nec sinit esse feros; on the contrary, the ferocious epidemic which has lately pervaded, &c. (vide 'To those whom it may concern,' and '*Hospital Reports,*') appears, like Circe's wand, to have converted men into brutes;" and with you, and in *your own* identical words still, we join in the "hope that the good sense of Englishmen will ultimately repress this terrible revolution in the manners and conduct of medical men;" and, in words of our own, that the editor of the late Medico-Chirurgical Review may, without delay, be brought to the tribunal which he *has himself erected*—may be tried by his *own individual and sole evidence*—condemned, dog like, to devour his own vomit, and "the Lord have mercy upon his soul!!!"

GUY'S HOSPITAL.

CASE OF STRANGULATED VENTRAL HERNIA—OPERATION BY MR. BRANSBY COOPER,—DEATH.

Wm. Cartwright, ætat. 38, a stout and muscular man, of pugilistic renown, was admitted into Luke's Ward on the afternoon of Friday, the 6th of June, under the care of the Junior surgeon.

The patient stated, that about twelve months since the hernia appeared as a small swelling, situated on the fore part of the abdomen, and that it readily disappeared on pressure. Under his ordinary occupations (being a labouring man) it had gradually increased; but as it was always easily reduced, it had not been productive of any serious inconvenience. On Wednesday last, when employed at his daily labour, the hernia became protruded to a considerable size, and its protrusion was accompanied with so much pain, that he was obliged to relinquish his work. He attempted to reduce the swelling, but could not succeed; the pain continued all night, so that he could scarcely rest, and he had no evacuation from his bowels till Thursday afternoon, when nausea and vomiting came on. A surgeon was then sent for, who bled him to the amount of 36 ounces, and used the taxis, but unsuccessfully. The tumour was at this time tender to the touch, and very tense. Leeches were applied, and some cathartic medicines were administered. No evacuation was obtained from the bowels, and, on the following morning, the man being much worse, was sent to the Hospital.

At the time of his admission, the countenance was excessively anxious; the features were sunk, and the cheeks flushed. The tongue was furred, and the skin hot; the forehead and palms of the hands were bedewed with a clammy perspiration, and the pulse was small, quick, and thready. The hernial tumour was of considerable size, being nearly as large as two fists. The hernial tumour became protruded on the left side of the linea alba, and just above the umbilicus. It was exquisitely tense and tender to the touch. The skin covering it had a shining appearance, and there was some tenderness of the abdomen generally. He had constant nausea, distressing vomiting, and occasional hiccup.

Upon consideration of the urgent nature of the symptoms, it was at once determined that an operation should be performed, to which the man readily consented.

The operation was commenced by making the ⌊ incision; the different coverings of the hernia were successively divided, and the hernial sac opened. The contents proved to be intestinal. Considerable effusion had taken place, the intestine was of a dark chocolate colour, and a small ecchymosed spot was observable. The stricture, which was chiefly formed by the mouth of the sac, was twice divided. As it was feared that gangrene had already commenced, it was thought most expedient to allow the strangulated portion to remain at the mouth of the sac, and in case the gut should give way, the man would have the chance of saving his life, although with an artificial anus. The operation was finished by bringing the edges of the wound together in the usual manner, and the patient was placed in bed.

He was ordered to take two drachms of the sulphate of magnesia in spearmint water every hour, until the bowels were freely opened. After the two first doses, the stomach rejected the medicine. Instead of salts being given in aqua menthæ viridis, they were administered in peppermint water, but with the same effect. A common glyster was injected. In the evening the glyster was repeated, but no evacuation followed.

7. The patient has passed a restless night. He complains a good deal of pain in the right side of the abdomen. The pulse is 104, and *sharp*; the tongue furred, and the countenance anxious, but less sunk; the skin hot. He has had no evacuation from his bowels. The common enema was repeated three times, but no evacuation followed. The vitriolated infusion of mint was given, but the stomach rejected it immediately; it was therefore discontinued. No bleeding ordered.

In the after part of the day the patient passed a small quantity of fæcal matter, probably some of the contents of the rectum. The abdomen was fomented, and he was ordered to take two grains of calomel, with half a grain of opium, every two hours. In the evening he became exceedingly restless, and the pills were discontinued, having taken but three. Still no blood abstracted.

8. The patient has slept a good deal during the night. The tongue is less furred; the temperature of the skin is lower; the pulse at 92, and softer; the abdomen much less tender; and the countenance decidedly improved. He was ordered to take two grains of calomel, with one grain and a half of opium, every two hours.

9. On inquiry this morning, we find that, on the preceding evening, the bowels were rather copiously evacuated. After he had taken two of the pills he fell asleep, and had passed a good night. The skin is now scarcely above the natural temperature; the tongue is much cleaner; the pulse is 88, soft and compressible; and there is somewhat less tenderness of the abdomen.

In the course of the day the dressings were carefully removed, in order to examine the state of the wound, and it was found that a layer of adhesive matter had been thrown out, which completely covered the intestine, so that no part of the gut was discernible. Perfect quietude, and a strictly spare diet, were enjoined. No medicines were prescribed for him.

About three o'clock, p. m., the same day, (Monday,) he was suddenly taken with a severe pain in the abdomen, and a state of alarming collapse supervened. The countenance became anxious and pallid; the features shrunk; the pulse small, quick, and thready; the extremities cold; the respiration hurried; and an unusual coldness and dampness of the surface. The abdomen, though excessively painful, was not so when compressed by the hand, but rather became easier, which led to the belief that ulceration of the gut had taken place and that extravasation of fæces had been the result. The patient was exceedingly restless, and was constantly throwing his arms about the bed. His body emitted a most peculiar cadaverous smell, and he was evidently sinking. Brandy and wine were ordered to be given him at intervals. He lingered out till the afternoon of Tuesday, when he expired.

Inspectio Cadaveris.

On dilating the wound, and exposing the cavity of the abdomen, there were marks *of the most intense peritoneal inflammation* having existed. The intestines were much congested; the sides of the knuckle of the gut, which had formed the hernia, were glued together by adhesive matter; on opening it, a small spot of superficial ulceration was found, but there were no traces of gangrene. The peritoneal inflammation had gone on to such an extent, that not less than a gallon of fluid, in which were floating large flakes of coagulable lymph, was effused. The great omentum was much shortened, and there were other signs of chronic peritonitis having existed. The liver was enlarged, and on cutting into it several small abscesses were found.

ST. THOMAS'S HOSPITAL.

ANEURISM OF THE TEMPORAL ARTERY.—OPERATION BY MR. GREEN.

The operation of tying the temporal artery was performed on Friday the 14th, by Mr. Green, in a case of temporal varicose aneurism, under the following circumstances:—

George Pascall, ætat. 28, was admitted into Edward's Ward, under the care of Dr. Scott, on account of pains in the limbs. A few days after his admission, he complained of uneasiness about the left temple, from a small tumour having rapidly enlarged, and in consequence, Mr. Green's attention was directed to the case. Upon examination, there appeared to be considerable dilatation of the artery from above the zygomatic process of the temporal bone, extending upwards about three inches, at which extremity was a small aneurismal sac, that could not be emptied by pressure. It appears, that about five years ago, the patient was cupped on the temple and the artery scarified, from which there was profuse hæmorrhage. Pressure was applied, and the wound soon healed; but a few days after, a small tumour of about the size of a garden pea, was observed on the forehead, which, in the course of a month, burst, attended with considerable bleeding. Pressure was again applied on the artery, and the man recommended to have it divided, which operation, we presume, was *intended* to be performed, but in the space of a month the tumour again formed and burst. Pressure was applied, and for some time kept up, until the wound healed.

From this time, the artery gradually enlarged; and until the man's admittance into the Hospital (a lapse of nearly five years,) the only inconvenience he had felt was from the noise of the artery pulsating, which at times was so great as to prevent him from sleeping.

The operation was performed by first tying both the artery and vein immediately above the zygomatic process, dissecting out a part of the dilated artery and tumour, and applying ligatures to two branches into which the temporal artery divided superiorly. The edges of the wound were retained together by means of adhesive plaster, over which a compress of lint was placed.

TEMPORARY PARALYSIS OF THE LOWER EXTREMITIES, RESULTING FROM INJURY.

John State, ætat. 4, was admitted into Luke's Ward, on the 7th of June, with complete paralysis of the lower extremities. It appeared, that in crossing a street he slipped up, and fell with his back against the curb-stone of the pavement. Upon examination, it was found that the parts, from the crista of the ilium downwards on each side, were completely devoid both of sensibility and power of motion; a sharp-pointed probe was introduced into the leg, without the boy manifesting any signs of pain.

The boy was brought to the Hospital in the forenoon, soon after the accident; he was cupped in the course of the day, a dose

of house-medicine administered, and the urine drawn off. On the following morning the paralysis was entirely gone, and the boy was dismissed from the Hospital cured, on the 12th.

ST. BARTHOLOMEW'S HOSPITAL.

On Tuesday, June 10th, Mr. Lawrence amputated the thigh of a woman, aged 45. The patient was admitted into the Hospital, May 16, with a simple fracture of the tibia and fibula, about two inches above the ankle joint. The leg was placed upon its side in the semi-flexed position; but the patient became so restless that it was found necessary, in a few days, to change it for the straight position, and the limb was placed in a fracture-box. Inflammation of the leg supervened; leeches were repeatedly applied; but it terminated in extensive sloughing of the skin and subcutaneous cellular tissue of the foot, and lower part of the limb; the broken end of the fibula became exposed, and there was copious discharge of matter. The strength of the patient was much reduced; but by the free use of wine, ammonia, and nutritious diet, she rallied, and her pulse became quick and moderately strong; the tongue was clean and moist, and the functions of the stomach tolerably good. Extensive suppuration was, however, still going on, and there were two or three fistulous openings at the upper part of the leg. Mr. Lawrence now proposed the removal of the limb, as affording the only prospect of saving the life of the patient; observing, that the circumstances which were favourable to this measure were, the age of the patient, the state of the pulse and tongue, and the absence of that excitement which is generally observed in cases of this description, and which often continues after the removal of the limb. The leg was removed above the knee, by the circular incision. There was very little blood lost during the operation. Two grains of opium were given immediately afterwards, and repeated at bed-time; it produced rest and some sleep. Brandy and water, and ammonia, were given at short intervals. She grew more feeble, and expired on the following day.

LONDON VETERINARY SOCIETY.

The Members of this Society assembled by adjournment on Tuesday evening last, at Mr. Youatt's, when F. C. Cherry, Esq., was unanimously called to the chair.

The minutes of the previous meeting having been read and confirmed, the election of officers was postponed to Tuesday evening next, June 24, at seven o'clock, when the Society will again assemble at Mr. Dermott's theatre, Little Windmill Street.

In the course of the evening, several interesting discussions took place, and some morbid specimens exhibited, amongst which was the brain of a horse having two large tumours growing from it; the history of the case will be detailed on the next evening. This specimen was produced by Mr. Rogers.

The Society has commenced under the most auspicious circumstances, and we hope that the Members of the Veterinary profession will give it their most ardent support.

ENGLISH PHYSICIANS IN PARIS.

To the Editor of The Lancet.

Sir,—The article you extracted from the Gazette des Tribunaux, giving the report of a trial for defamation, brought by Messrs. Roberts and Langeois, against thirteen English physicians, and in which they were adjudged to pay five thousand francs damages, with costs, and to be placarded on the walls of Paris, as defamers, is a matter of no slight consequence to the medical character of our countrymen abroad, morally and professionally. What would be said in this country, if thirteen physicians combined, or rather conspired, had written, what seamen call a round robin to an authority, such as that of an ambassador; which deprives an innocent man of his fair professional exertions, and causes him to stand in obloquy, if not sent out of the country in which he is domiciled? Would not our blood curdle with indignation? and should we not instantly appeal to twelve honest men, (not physicians,) to remedy such civil injury, as we would to the free exercise of The Lancet, to scarify every such depraved professional delinquent? Upon what plea is all this done? Why, because *they suspect* that Mr. Roberts is cognizant of an article in the French paper L'Hygié, imputing some per centage understanding between them and a French pharmacien; at least such is their ostensible plea. Mr. Barthe, the French counsel on this trial, aware that our country vomits forth upon the French shore practitioners, as well as subjects, whom our public weal can well dispense with, particularly addressed himself to Dr. B. the leader of the junta, and certainly if one half of what is published in hand-bills, &c. of that indivi-

dual in this country, and at Paris, be true, he must be a consummate blockhead.

On the other hand, I have reason to know, that Mr. Roberts is an open, warm-hearted, inoffensive man; and, inasmuch as his conduct is forbearing to others, feels and resents an injury to himself, in a mode or measure that a cold, calculating, phlegmatic man would say was not within discreet bounds, seeing the great disparity against him of thirteen to one: still, in a foreign land, he has displayed an admirable degree of public spirit. Finally, it is melancholy to reflect, that such a host of men, calling themselves physicians, should be exhibited in so degrading a light to the French public; and, under the guise of exercising a liberal profession, pursuing a spirit of hostility and revenge against a brother practitioner, for no other reason, apparently, than that his success in practice comes into conflict with their base and monopolizing avarice.

R. I.

CASE OF STRICTURED VAGINA, FOLLOWING EXTENSIVE LACERATION DURING PARTURITION.—SUBSEQUENT PREGNANCY AND SAFE DELIVERY OF THE PATIENT.*

Dr. James M'Naughton, the distinguished Professor of Anatomy in the University of the State of New York, relates the interesting case of an unfortunate female, who, having in a labour of extreme difficulty suffered laceration of the vagina and bladder, recovered with such a cicatrization of the parts as almost obliterated the vagina. Nevertheless, at the end of eight years she became pregnant, and went through the usual period of gestation, at the end of which Dr. M'Naughton was called to attend her. On examination there was found a firm cicatrix of cartilaginous hardness, situated two inches from the orifice of the vagina. At the upper part, near the symphysis pubis, there was a small perforation leading to the uterus; beyond the cicatrix, the vagina was ascertained to be natural. After some delay the doctor divided the stricture laterally, on both sides, and introduced his finger to the os tincæ, which he found dilated. As the labour progressed, and the cicatrix was rendered tense by the head of the child, which presented favourably, the orifice of the cicatrix was still further dilated by incising its margin slightly in several places. At length it became much dilated, and Dr. M'Naughton flattered himself that a living child might be born.—The pelvis, however, being preternaturally small, the head became immoveably locked, and he was compelled to the use of instruments. The forceps being inadmissible, and the vectis proving ineffectual, the crotchet was the dernier resource. The calvarium having been broken up, and the brain removed, there was still great difficulty in moving the head. At length the delivery of the child was effected, but the organs of the mother were so much injured that an opening between the bladder and vagina occurred, and the urine distilling upon the lacerated parts produced great distress. To obviate this evil a catheter was introduced into the bladder, and a pledget of charpie was applied to the opening. Judicious management restored the patient to health, and healed the lacerated septum.

Professor M'Naughton thinks, the stricture in this case was so complete, that in coition not a particle of the seminal fluid could have reached the uterus.

* New York Medical and Physical Journal.

CASES IN MIDWIFERY.

By Richard Long, M.D. Surgeon to the Arthurstown Dispensary.

Case in which the Body of the Fœtus was separated from the Cranium; the Head remaining in the Womb.

In April, 1826, Dr. Long was called to Mrs. F., aged thirty-four years, who was in her fourth accouchement, her former labours having been uncommonly favourable and quick. She had been in labour four days; there had been an arm presentation; the arm was removed; the thorax perforated; its contents evacuated, and, as it afterwards appeared, the crotchet had been passed through the thorax, and fixed between the first and second cervical vertebræ. In this position the unremitting exertions of the gentleman in attendance, a powerfully strong man had been used four hours to accomplish delivery without effect. On Dr. Long's visit, the uterine action continued so forcible as to preclude any attempt at turning with safety; it was also clear that delivery could not be accomplished while the body and head of the child remained in the present posture; he therefore sought for the other arm, which was removed, and immediately the remaining portion of the body was expelled with violence; but, to his great dismay, the head was separated, and remained within the uterus. Before the uterus had time to contract, Dr. Long introduced his hand, and firmly fixed the head against the side of the uterus, his colleague at the same time steadying it by external pressure; the head was then perforated, and extraction accomplished by the crotchet.

In June, 1827, Dr. Long was again called to the same patient, who had been some hours before delivered, naturally, of a still-born child; the placenta was retained without hemorrhage. On examination, a firm hour-glass contraction was found in the centre of the uterus; this, however, was not the cause of the placenta being retained, as it was found firmly adherent near the fundus uteri, and required a tedious exertion with the fingers to effect its separation piece by piece. The part of the uterus to which the placenta adhered had a gristly semi-cartilaginous feel.

This woman appeared to go on well for several days after her confinement, but, from some mismanagement, peritoneal inflammation was produced, by which she was carried off.

Case of Uterine Hæmorrhage.—In November, 1827, Dr. Long was requested to visit Mrs. W., aged 39 years, who had been delivered two hours before of her eighth child. She was, to all appearance, dead; there was no perceptible pulsation or breathing, except a slight convulsive heaving of the chest; the eyelids were half opened, and the eyes turned up, as in instances of recent death; the lips were colourless, the face cold and clammy, and the extremities quite cold. On examination, the uterus was found flaccid and uncontracted, and the woman drenched in blood. The placenta had been removed.

The hand was instantly passed into the body of the uterus, and, by frequent friction of its inner surface, muscular contraction was excited. The nostrils were stimulated by hartshorn, and warm wine and hartshorn were poured down the throat, apparently without any effort of deglutition by the patient. Warmth was applied to the extremities, and a large sheet, quadrupled, and wetted in the coldest spring water, was placed over the abdomen. For some hours, the success of those means, although steadily persevered in, appeared extremely doubtful. As the uterine action, however, was restored, the vital spark appeared to rekindle, and animation was slowly but perfectly established. After several weeks of suffering from extreme debility, the patient was able to resume the care of her domestic affairs.

FELINE OBSTETRICS.

There are two female cats, mother and daughter, dwelling in the laboratory of a sculptor of first-rate eminence, in the west end of town. They are by no means kindly disposed towards each other; rather the contrary, excepting on particular occasions, which are their respective periods of parturition. So soon as one exhibits parturient inquietude, the other endeavours to cheer her by all the kind attention she can perform towards her mamma, or daughter, as the case may be; and when labour actually takes place, they both repair to a box, which serves them for a bed, and, placing their backs against the opposite sides, Madame Accoucheur places her paws against the abdomen of her patient, and continues the operation of kneading and rubbing her until a kitten is passing the *os externum*. Then she changes her mode of attention, and assists in bringing forth the young one, in a manner which instinct informs her is most calculated to alleviate the pangs of birth!—*Med. Rep.*

BOOKS PUBLISHED THIS WEEK.

Morrison's Cases of Mental Diseases. 8vo. 7*s.*

Harwood's Curative Influence of the Southern Coast of England. 8vo. 9*s.* 6*d.*

Stevenson on Deafness. Post 8vo. 7*s.* 6*d.*

Williams on Disease of the Lungs. 8vo. 7*s.*

Philip on Indigestion. 8vo. New Edit.

Watson's Compendium of the Diseases of the Eye. 8vo.

Stone on the Evidence of the System of Phrenology. 8vo.

Lambe on the Properties of the Thames Water. 8vo.

SUBSCRIPTIONS

FOR THE DISTRESSED MEDICAL GENTLEMAN AND FAMILY, RECEIVED SINCE FRIDAY LAST.

	£.	s.	d.
Sum already advertised	25	13	0
J. P. Vincent, Esq.....	1	1	0
A. B.....	1	0	0
Martin Ware, Esq.....	1	0	0
James Wardrop, Esq...	1	0	0
B. C. Brodie, Esq.....	1	1	0
Geo. Sigmond, M.D...	1	1	0
J. E.....	1	1	0
W. Jeaffreson, Esq., Framlingham....	1	1	0
W. Cooke, Esq.....	1	1	0
Dr. Reece	1	1	0

TO CORRESPONDENTS.

Dr. Blundell's Lectures on Midwifery will be resumed in a week or two, and will be completed in the present volume.

Others in our next.